BRITAIN'S BIGGEST AND BEST-SELLING AMIGA MAGAZINE

AMIGA FORMAT

ISSUE 22 ■ MAY 1991 ■ £2.95

Get in the know with our crucial guide to snatching cool sounds, grabbing perfect pictures and scanning sharp images

SCAN IT • USE IT • GRAB IT • SAMPLE IT



COVER DISK 22

AMIGA FORMAT



Gods

The one you've all been waiting for! Catch your first taste of the brilliant Bitmap Brothers' new Renegade release



Pic of the Month
The eagle has landed, in this month's star artwork

Sample it for yourself!



Twist, distort and warp sampled sounds to get the funkiest sounds around with this simple utility: plus example samples to play with

Documentation on page 15

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ERIOR SPECIES

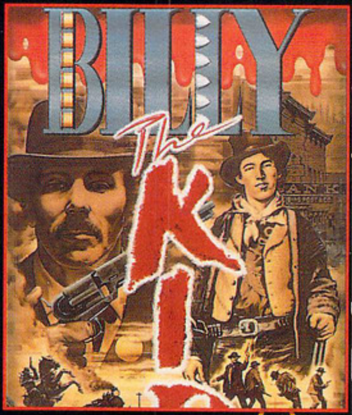
THE RIGHT STUFF

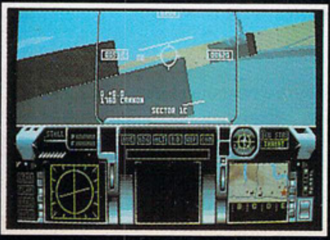
F 29 Retaliator presents the fastest and most detailed graphical enviroment ever seen in a flight simulator. This is the only flight simulation to provide 100 complex missions over four intense battle senarios. The only flight simulation to provide detailed daily war update reports. The only flight simulation to present the latest in aerodynamic technology introducing ECOP cockpits, backwinder AAMS, supercruise, stealth and more! F29 Retaliator is that flight simulation.



GUN LAW

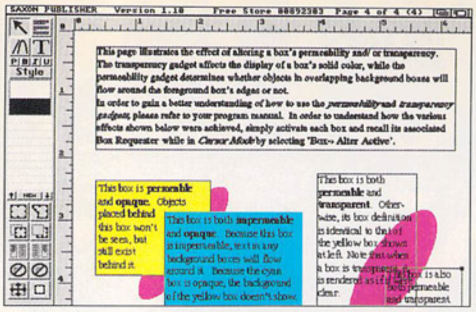
"BILLY THE KID" is a one or two player action/strategy game set in the Wild West, which allows the player to assume the identity of either a gun totting desperado with a heart of gold , Billy himself or his ex-best friend, sharp shooting, law abiding pillar of the community, Sheriff Pat Garrett. They are in love with the same woman and ultimately, in a nail biting climatic finale, are going to end up pointing guns at each other. Only one character can walk away from this showdown BUT THAT'S JUST THE WAY OF THE WEST





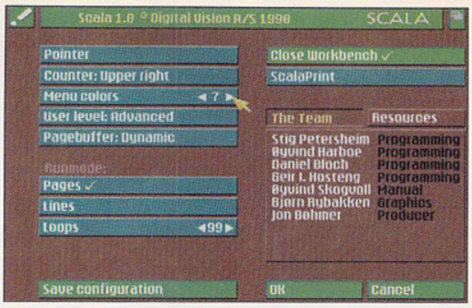


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Saxon Publisher 147

A new DTP heavyweight arrives



SCALA 150

Setting new standards in friendliness



Education 119

All the latest in kids' fun – reviewed



Appropriate technology

Music, video, design, art: in the 90s you don't need talent as long as you have the technology! Learn how to get great pictures and sounds with our total guides to digitising and scanning pictures and sampling sounds.

Grab it...

The video digitiser is the artist's most useful tool in the 90s. Catch our guide to grabbing p23

Sample it...

Chart hits are within the reach of the man in the street. Find out all about sampling p29

Scan it...

High-quality pictures for design are just a short step away. Check out our full scanner test p159

AMIGA FORMAT 22 MAY 1991

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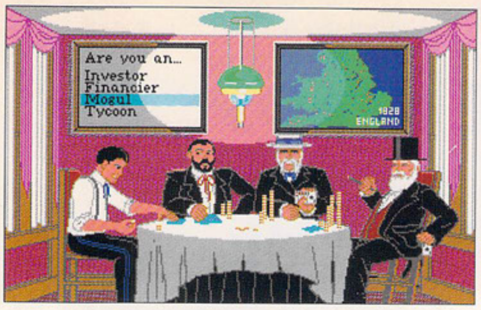
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MAIL ORDER DEPARTMENT
Take advantage of our Mail Order bargains. See the Special Offers details on Page 182 of this issue!

The Old Barn, Somerton, Somerset TA11 7PY ☎ 0458 74011



Railroad Tycoon 50

So, Mr Brunel, why do you want this job?



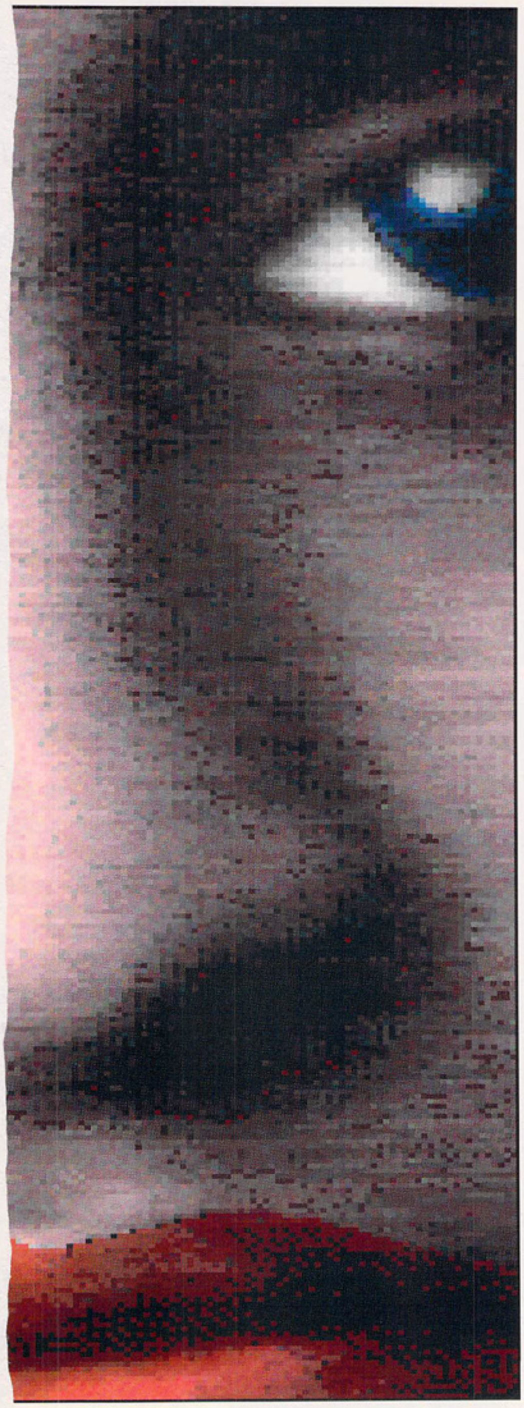
PGA Tour Golf 68

Going crazy on the greens



Brat 64

Here, kid – go play on the freeway!



Contents

Screenplay p 49

Coverdisk p 15

GODS – It's the game everyone wants to get their hands on at the moment – and we're the only ones who will let you! The Bitmap Brothers' latest is their first outing on the Renegade label and promises levels of exciting platform puzzle action.

SAMPLE EDITOR – Get in the know and up to date with the age of the electronic artist. Find out for yourself how digital sound samples work.

PIC OF THE MONTH – Entitled 'Land of the Eagle', this picture shows what HAM can do for your atmosphere!

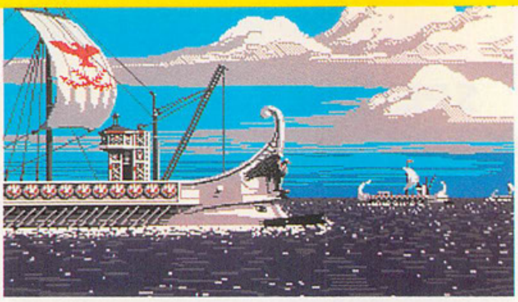
VILBM AND PPMORE – This month we're showing you how to use these handy utilities to display your own text and pictures.

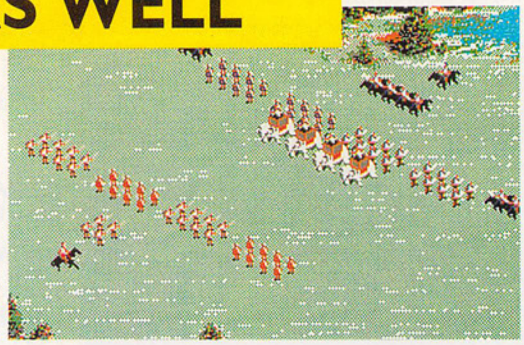


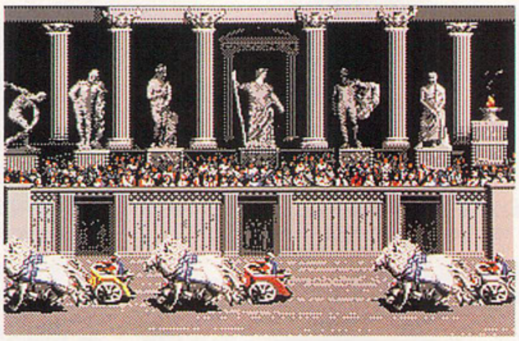
Quote of the month: "The first thing we do, let's kill all the lawyers"

ABC
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EVERY CINEMATIC ADVENTURE NEEDS BLOOD AND GUTS - CENTURION'S THE FIRST TO REQUIRE BRAINS AS WELL

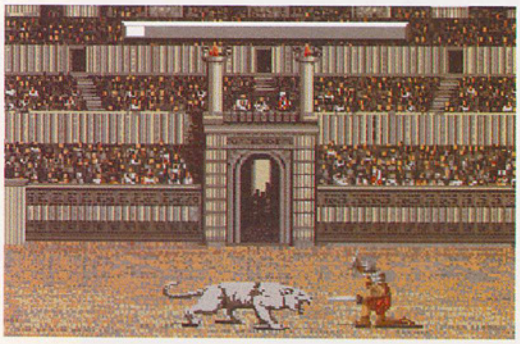












Up until now, so-called "cinematic adventures" have offered little more than a fair bit of action, a few pretty pictures, a couple of fairly convincing sound effects and a strategic challenge that wouldn't stretch the intellect of a gnat.

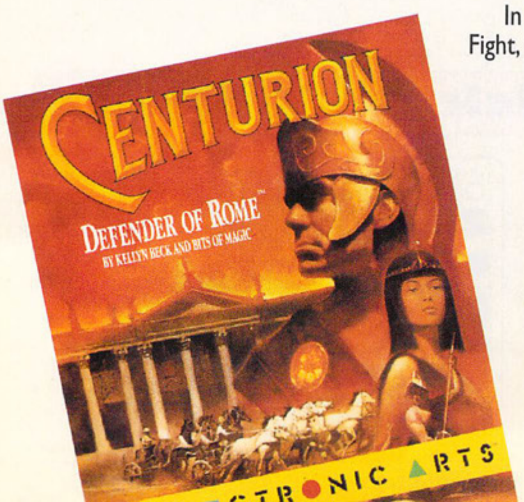
Now, from a new generation of games from "Defender of the Crown" designer, Kellyn Beck, comes "Centurion: Defender of Rome", the first movie game that allies stunning graphics with really challenging game play.

In Centurion, you must choose from an infinite number of ways to conquer the known world. Fight, bribe and seduce your way to the top: on the battlefield, in the gladiator's arena, on the chariot racetrack, even in Cleopatra's boudoir.

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Sample the new products at Computer Shopper Show

You can expect to catch glimpses of over 50 brand new products for the first time, including a new sound sampler, at the upcoming Computer Shopper Show (Alexandra Palace, London, May 10-12). The Spring Show is confidently expected to be dominated by the Amiga, as witness the words of the show's organiser, Stephen Bozdan of Blenheim Database: "If it carries on like this, the only other machine capable of holding its own will be the PC".

Details of new releases are a little sketchy at present, but as well as rumours of Photon Paint 3 from MicroIllusions we have confirmation that Power will be demonstrating two new hard disk drives and that New Dimensions will be showing off Technosound Turbo, an uprated version of their sound sampler incorporating sequencing and MIDI compatibility among its new features (see Page 29 for more about samplers).

The high point of this particular show for the visitor is usually the chance to collect bargain buys and this year the organisers expect that over £1 million in bargain buys will change hands. Visitors quizzed on leaving past shows have nearly all felt that "substantial savings" were on offer, with figures reported ranging from £50 to £1,000. Blenheim Database Exhibitions 081 868 4466.

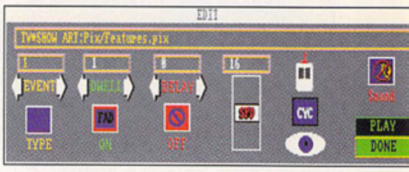
Other show dates for your diary are the first out-of-London adventure of the All Formats Computer Fair, for the real computer fanatic, at the National Motorcycle Museum, Birmingham on April 21st: and the MIDI Music Show, a real treat for MIDI musicians, at the Novotel, Hammersmith, London on April 26 to 28.

Dramatic Database

The most widely-acclaimed of Amiga databases is to be released in an upgraded form very soon. *Superbase Professional 4* from Precision has a list of features longer than the longest of arms, but the key to it lies in a new graphic user interface developed in a Workbench 2 style. As before, however, it has the unique video-recorder style controls to allow you to spin through records. More details in the full review next issue. Precision 081 330 7166.

Amiga storms home video shops







The latest Amiga bundle has nothing to do with Commodore: it's been put together by retail camera chain Jessop's and could turn Amiga-based home video editing into a popular activity, on a par with taking your holiday snaps or videoing your sister's wedding.

The bundle is based around the Amiga 500 with a 512K RAM expansion and is aimed squarely at amateur video editing, with a MiniGen genlock included to allow the user to combine signals from a VCR with screens and animations from the Amiga. The software included to enable the user to play around with Amiga and video images includes *Deluxe Paint III*, TV*Text and TV*Show and the overall price of the bundle is £699.

It's a well thought-out package, with very good software at a reasonable price and should sell well. Jessop's see home video editing as "an increasing and vitally important area" and are "heavily into editing", committing themselves to "more than just selling camcorders". They also back up their sales with hands-on training courses at their Leicester HQ at a cost of £35. The bundle, described as "the complete home video production unit", will be called the 'IQ Video Amiga DeskTop Video pack' and is available in 55 Jessop's stores nationwide now. Jessop's 0533 320033 (Marketing Dept for details of training courses).

Amiga animators star in video arts festival

The remarkable work of Amiga video artists Julie Myers (see Issue 21, Portrait of the Artist) and Clive Gillman can be seen in Liverpool this spring as part of Britain's largest ever video arts festival, Video Positive 91 (April 20 to May 6). Both artists will use video walls and projectors to show imagery generated on Amiga 2000s.

In 1990, in collaboration with Susan Collins, Myers produced Going For Goldfish, a video animated art piece using an Amiga, as part of the Manchester Olympic Festival. For Video Positive she is working with Jackdaw, a new animation company in Liverpool, who will be showing the end results of a series of workshops as a video installation at a public site in Liverpool.

Clive Gillman has recently been working on Losing, an installation on football which will turn the Open Eye Gallery in Liverpool into a penalty area over the festival. Before he left to go freelance, Clive worked extensively with Amigas at London Video Access – London's video arts centre – running both introductory and advanced workshops in the creative application of a broad range of Amiga software and hardware.

Other video installations being staged at 'Video Positive' include: Magnification Maximus by Lei Cox (UK) and Alchemy by Simon Biggs (Australia) at the Liverpool Tate Gallery: Triune by Tony Oursler (USA) and Wishing Well by Catherine Elwes (UK) at the Bluecoat Gallery: and Chasing Skirt by Severed Heads (Australia) at the Walker Art Gallery.

A full review of the Video Positive 91 festival will feature in one of the summer issues of *Format*. For further information contact Nik Houghton on 051 709 2663.



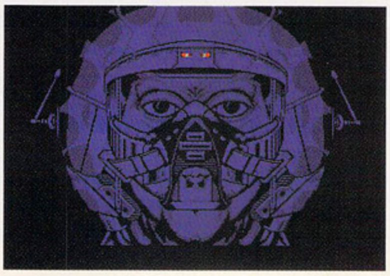
Big in Video

As the Amiga rapidly becomes accepted as part of the equipment of many a professional studio, video software specialists ZVP have announced a range of new video production tools in an updated professional version of their *Video Studio* software. The *Video Studio Professional* is described as an 'integrated post-production environment'. It is aimed primarily at titling and captioning but it includes many other little essentials for video production, such as colour test-cards and a synched countdown clock. We will be bringing you more details of this and other ZVP video tools in a review in a forthcoming issue. ZVP 0268 411719.



Added value mouse

Naksha's mechanical mouse, one of the best replacements available for the standard Amiga model, is to be made available in a special reduced-price package with a free game. It's not a bad game either: Operation Stealth from US Gold scored 90% and a Format Gold award in Issue 15. The pack is on sale now at a price of £29.99 + VAT, and we reckon it's very good value. Naksha UK 0925 56398.



Grab it: cheaper





Rombo's Vidi range of digitising hardware and software (see guide to digitisers on Page 23) is to be combined in a high-value, high-performance bundle that will put a whole heap of grabbing possibilities at your fingertips.

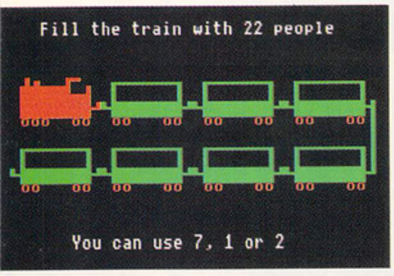
The new bundle is being described by Rombo as "the complete solution" this is because it includes their whole range of Amiga digitising kit. It kicks off with the original Vidi-Amiga software and hardware, which allows instant 'real-time' black-and-white grabbing and can also grab sequences of 16 pictures, animate them and colour them, as well as putting 'windows' for a fresh grab into a previous grab.

Next addition is the Vidi-Chrome software, which allows Vidi to grab 4,096-colour HAM pictures using a three-pass RGB filtered system: then the RGB splitter hardware, Vidi-RGB, which takes the hassle out of the process by doing the RGB separation for you.

The total cost of the package is £179, which compares well with what you would have to pay if you bought the elements separately: Vidi-Amiga at £99.95 (reviewed AF Issue 3), Vidi-Chrome for £19.95 (reviewed AF Issue 10) and Vidi-RGB at £69.95 (reviewed AF Issue 17), a total of £189.85. When you add in a free copy of Photon Paint, you're well away. There is also a demo disk available from Rombo at a price of £1.95 to let you get a taste of what Vidi can do. Rombo 0506 414631

New BBC emulator, Vista and more on Genisoft label

The Genisoft label is to tidy up UK distribution for a whole range of disparate kinds of program, varying from the latest release of the BBC Emulator, through a set of educational programs to latest versions of the fractal scene generator Vista and the astronomy program *Distant Suns*.



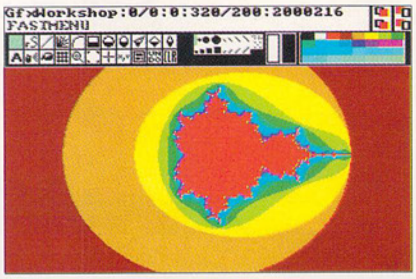


The new version of Commodore's official BBC Emulator will cost £39.95 and is now Workbench 2 compatible with support for faster processors. It is claimed to be much faster and also includes programs to read BBC or Archimedes 640K disks in the Amiga's disk drive while running BBC or Amiga programs.

The popular scene generator Vista, which produces 3D fractal scenery of great beauty, is to be updated with a new version called VistaPro, that only works in 3.5 Megabytes or more of memory but will turn out 24-bit 'True Colour' images without the polygonal look of the original. For now, the original Vista is available at £59.95 and the pro version will be an "inexpensive upgrade".

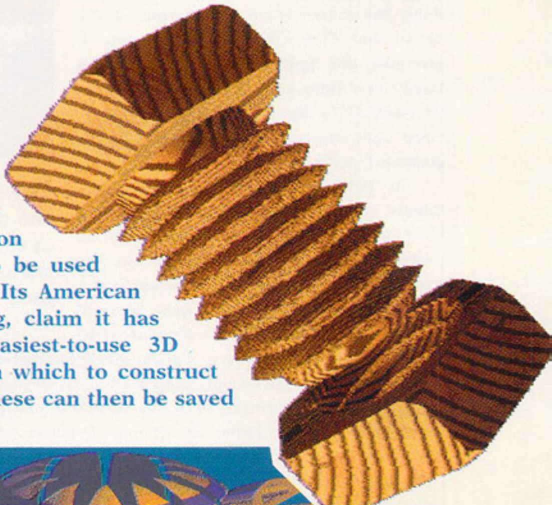
Distant Suns (£44.95), a star map program that reveals the secrets of the night sky, is to have three expansion disks covering the Yale Bright *Star Map* (9,100 stars for £14.95), two disks of extra *Sky Maps* (20,000 stars for £19.95, but needs a hard disk) and *Deep Sky Objects* (215 scanned images of nebulae and the like for £19.95). For schools in particular, they offer a vast amount of highly-specialised information.

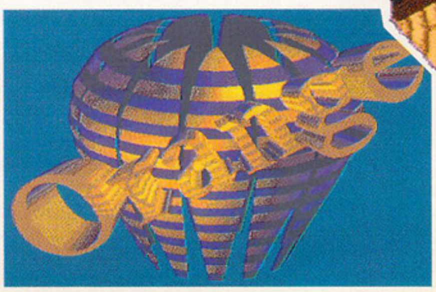
Other Genisoft releases include the *Weather Watcher* recording and analysis program, children's word processor *Kid's Type* and educational programs *What is it? Where is it?* covering geography and *Game Set and Match* for early learning. Genisoft 0753 680363.



Exciting 3D for DTP and Video

Draw 4D is a new three-dimensional modelling and animation program specifically targeted to be used within DTP and video projects. Its American producers, Adspec Programming, claim it has the "Fastest, smoothest and easiest-to-use 3D interface on any computer" with which to construct the polygon-based 3D models. These can then be saved in a number of different formats but of particular interest is the capacity to save in *Professional Draw* file standard, which immediately suggests a high priority on DTP use. A review should follow in the next issue. Surface UK 081 566 6677





Door to Door warning

It appears that many people are having problems after ordering the *Door to Door* routefinder program from Geographic, of Wilsden. Until we can clarify the situation, we advise that you do not order this program.

Sample it: soon

A new piece of sampling hardware will be arriving in the next couple of weeks, to join the wealth of sound sampling kit surveyed in our massive round-up on Page 29. Put together by two enthusiasts currently calling themselves Shadow, the prototype of the new sampler is claimed to be of 'excellent quality'.

The only hold-up at the moment is deciding on casings for the circuit boards ("we may go for novelty cases, like Coke cans or something" say Shadow) and the possibility of including readily-available software with the pack. More news next month.

Paint America

There's some good news and some bad from America. The bad is that the excellent new HAM animation package *Spectracolor*, reviewed in Issue 20, may not be making an appearance too soon due to a legal wrangle. It seems some of the code may owe a little too much to Photon *Paint 2*, the copyright of which is still held by Microlllusions. More news as we get it.

The good is that new US paint programs could soon find their way to this country, including Accolade's slightly aged *The Graphics Studio* and Holosoft Technologies' *The Graphics Workshop*, pictured left, a new 64-colour entry-level package. We may look at these soon in case it's worth a UK distributor to take them on board.

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A huge leap in RAM for Amiga

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Commodore

THERE'S A LITTLE BIT OF COMMODORE IN ALL OF US

Grab it quick: it's got two disks!

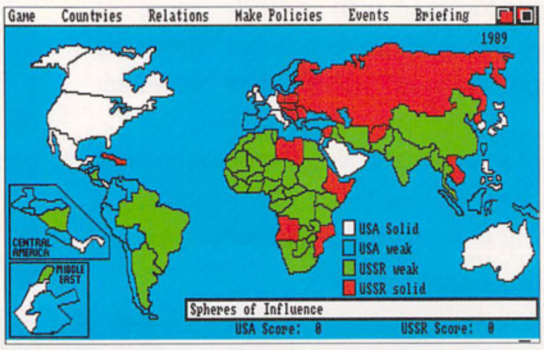
We did it at Christmas and so many of you asked us to do it again, we just had to say yes! The next two issues of **AMIGA FORMAT** will both come with a second Coverdisk and a complete full-price classic game!

You asked for it, so we've delivered it. We'd like to do it every month, but they won't let us: so we've come to a very special arrangement to bring you a second Coverdisk on both of the next two issues.

Each second disk will feature a complete, full-price commercial game, and not just any old game, either. We've picked out a couple of real classics that will keep you entertained and absorbed for hours, even if you don't normally spend much time dabbling in games.

Now of course this will cost money: but we've absorbed most of the expense for you. The Special Issue price will be £3.95, only £1 above normal. For an extra blank disk, this would be good value: but for a whole full-price game as well, we think it's extraordinary.

NEXT ISSUE'S GAME
BALANCE OF POWER



Mindscape's *Balance of Power* is widely accepted to be one of the most challenging and intriguing games ever created. It was chosen by our experts as one of the Best Eleven games of all time way back in Issue One of *Amiga Format:* yet its longevity is such that it also appeared in our All-Time Top Fifteen games in Issue 19 at the beginning of this year.

ISSUE 23, JUNE 1991 – ON SALE 9TH MAY £3.95

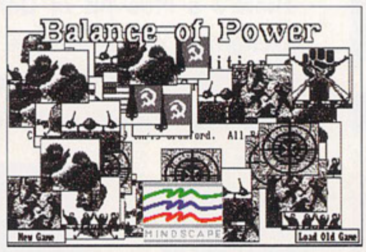
IT'S A WHOLE NEW WORLD!

BALANCE OF POWER COMPLETE GAME

You'll spend many an hour wrapped up in the alternative reality of this fascinating and complex strategy game. A real classic.

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"The current zenith of strategy games... After playing this, you should know more about international politics than most politicians do." (*AF* Issue One).



"It's pure, brilliant, unadulterated gameplay. What both players are trying to avoid is nuclear war... when you're presented with the enormous range of problems in the game it's easy to go to DefCon 1 over something little like a trade treaty with Libya. Superb stuff." (*AF* Issue 19).

ENTER THE NEW DIMENSION OF 3D VIRTUAL REALITY!

This special issue concentrates on the mysterious alternative reality of three-dimensional graphics. Learn all the secrets of how 3D games are programmed. 3D experts Mike Singleton (*Midwinter*), The Assembly Line (*Cybercon 3*), Incentive (Freescape) and MicroProse (*F-15 Strike Eagle*) reveal all.

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Will tell you all you need to know about the most powerful area of the Amiga. Complete with reviews of three new packages!

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And, of course, much more besides!

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And of course the double-disk Issues 23 and 24 are bound to sell like hot cakes. The best way to make sure you get your sticky mitts on these exciting issues is to cut out or photcopy the coupon on the left, fill it in, take it down to your newsagent and make sure he saves you a copy. Don't forget!

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There's one way you can get both these exciting two-disk issues without paying anything more than the usual price, and that's to subscribe to *Amiga Format* for the next year. Think about it: twelve issues of *Amiga Format* delivered straight to your door, a free special extra subscriber's bonus of a game or some serious software, plus the two double-disk issues of *Amiga Format* at no extra cost! You know it makes sense! See Page 138 NOW!

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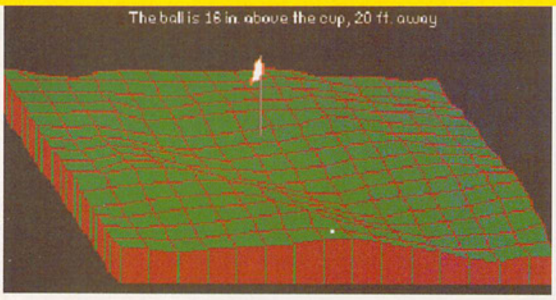
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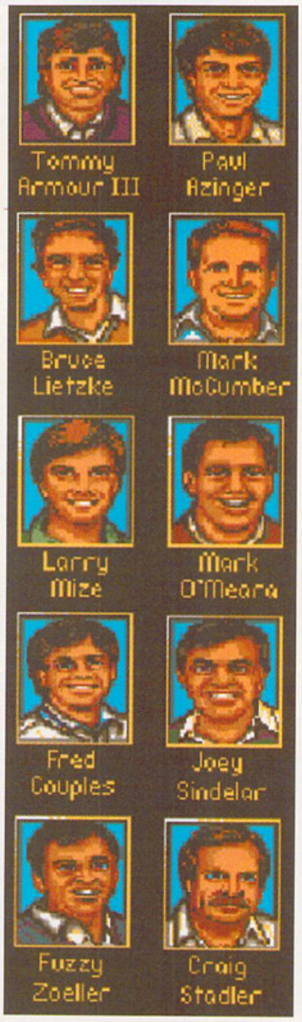
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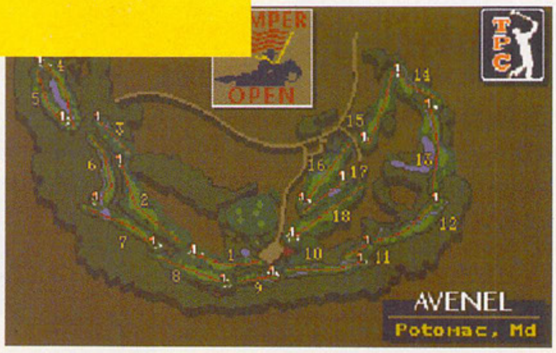
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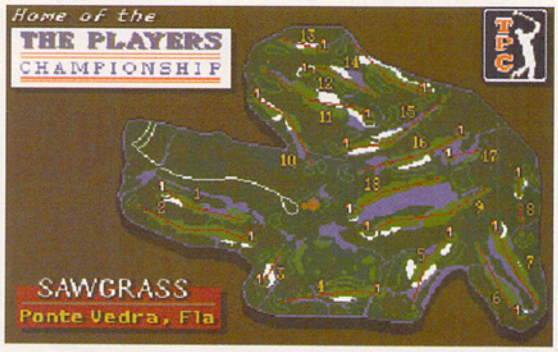


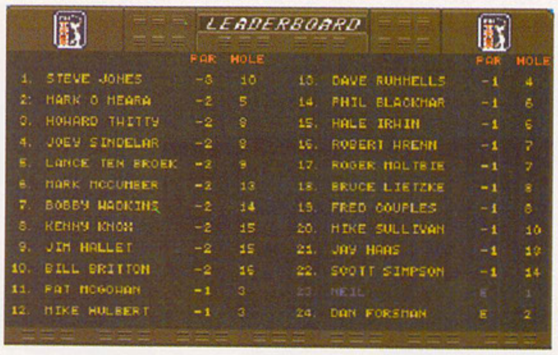












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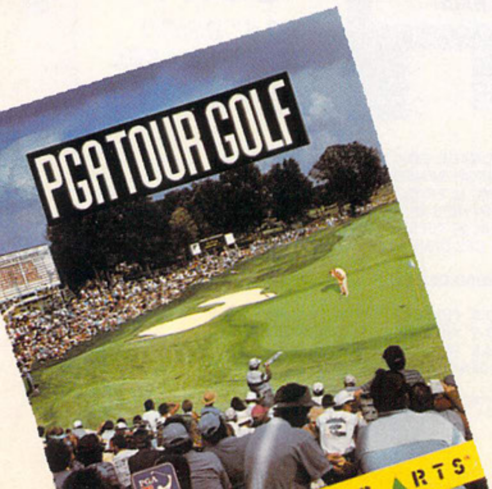
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ON THE DISK

GODS P15
Want an arcade challenge that tests more than your index finger? *Gods* is the latest game from the Bitmap Brothers – try it yourself to find if it's also their greatest yet.

SAMPLE EDITOR P16
Ever wondered just what sound sampling is all about? Play with various sounds on your own computer in a way that you thought was for the professionals only.

PIC OF THE MONTH P17
Not yet another cartoon, this time it's an atmospheric landscape shot which shows off just what you can do with an Amiga and a little skill. Think you can do better? Check it out first!

VILBM P17
One of the most useful utilities which we regularly use on our Coverdisk. This month we tell you how to use it to produce still slideshows of your very own.

PPMORE P17
Nico Francois is one of the best PD programmers around, so we thought it wise to tell you how to use the best text display system that you can get for nothing.

GETTING STARTED

To start the playable demo *Gods*, all you have to do is insert the Coverdisk and turn your machine on (or vice versa – it doesn't really matter). Viewing *Pic of the Month* or the *Sample Editor* instructions can be accomplished by inserting your Workbench disk first and switching your machine on. You will also need Workbench to set up the *Sample Editor* program itself.

MAKING A BACK-UP??
Problems
DISK FAULTY??
Turn to Page 18 NOW and learn how to use your Coverdisk

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COVER DISK

One of the best game demos we've ever had, plus a very useful utility to help get you started in sound. TRENTON WEBB gives the lowdown on Gods, while PAT McDONALD deals with the technical details.

GODS
RENEGADE PAL/NTSC

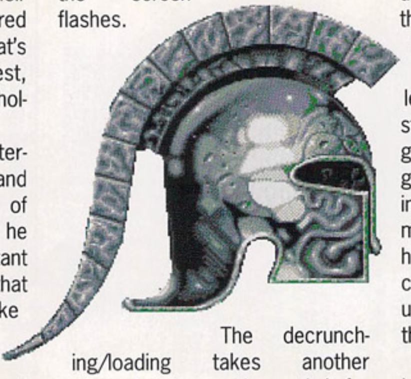


Hercules gets down to business in *Gods*. He must blast a path through to the crypt, avoiding the mace traps by using the switches. Which lever does the job though? There's only one way to find out, pull 'em!

Hercules is having a bad day. To earn his freedom, the Greek Arnie has been set the task of returning three ancient artifacts to their crypt. Currently, they lie scattered around an ancient temple that's filled with the nastiest, hardest, most intelligent, monsters mythology can muster.

To make life even more interesting the *Gods* Juno and Eurystheus have set a series of traps to kill Herc' before he reaches sanctuary. The resultant battle is an arcade challenge that makes the taking of Troy look like a cakewalk.

To initiate the challenge, simply switch on your Amiga and put the disk in the drive after the 'hand holding a disk' prompt. The screen will go blue and 30 seconds later a helmet will appear as the screen flashes.



The decrunching/loading takes another minute, but the wait's worth it for the Nation 12 soundtrack.

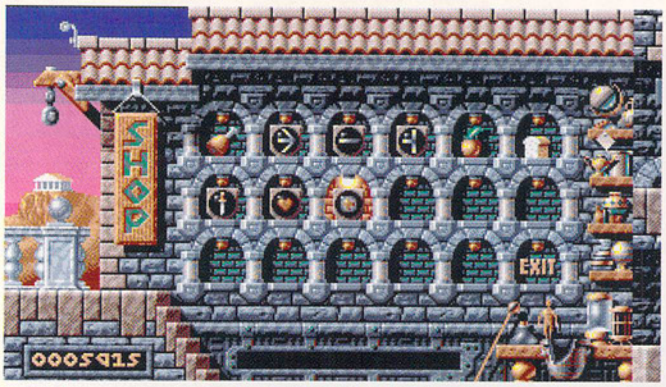
To get to the game itself, press fire (or the left mouse button) and in just under a minute it's time to get Godding. To speed through the credit screens use the space-bar.

Hercules appears in the lower levels of the temple and while he stands still, admiring the background graphics, he's in no danger. Moving Herc' is simple: pushing left/right on the joystick makes him walk; pressing up turns him to face the wall; pulling down causes him to crouch; while an upwards diagonal move causes the lad to jump in that direction.

He can take a number of hits before he dies (he is a Greek hero, after all) and a health rating is

GODS

RENEGADE PAL/NTSC



At the shop, move the joystick to highlight different goods, then press fire to identify them. Fire again to buy your dream weapon.

shown at the bottom left-hand corner as a beaker of Ambrosia.

Hercules is no wimp, throwing daggers, knives and axes ahead to kill enemies. He starts with nothing but can develop a deadly armoury. By running over any weapons 'token' that appears, he automatically adds that to his present armoury. The tokens are small black disks which feature the picture of the weapon they will give Hercules.

Herc, though, has some other special talents. Firstly, he can throw the switches found at head height throughout the temple complex. Turn him to face the wall (joystick up), in front of the switch, and press fire to throw it. The effect varies with the switch: some open doors, some de-fuse traps, some spring traps.

Objects of desire

Obviously Herc needs to collect the three items that must be returned to the crypt. These are found lying on the floor, but unlike tokens and treasure, they are not gathered automatically. To pick them up, crouch down over the artefact and press fire.

This accesses his backpack menu and four green windows appear at the base of the game's screen. One highlighted window will feature the item you want collected. Pressing fire cycles the highlight along by one window.

To gather the object, release fire and let the joystick centre when the the highlighted square doesn't contain any item you still want to carry.



To flick a switch stand in front of it, push up and press fire.

To drop and use an object, exit the backpack menu when the desired object is highlighted. It will then be dropped right in front of Hercules. Keys are the only exception to this backpack rule. They must in fact be placed in the backpack as normal, but are used automatically when Herc' touches a locked door.

As soon as Herc' moves the game begins and the first objective is to find a weapon. If he runs to the right a clue token and a dagger appear, which is just as well, because behind him the first two beasties have materialised.

The first half of the demo requires Hercules to work his way up and out of the temple. He will need to climb ladders (press up at the ladder's base) and leap between the platforms, collecting both treasure and artifacts as he goes along.

Going shopping

Once near the exit, as if by magic the shopkeeper will appear and take Herc' off to spend the cash he has collected.

At the shop Herc' can examine any object simply by highlighting it and pressing fire once. A description will appear on the message bar at the bottom of the screen. Pressing fire again buys the object. He is however, only allowed one item from each row of goodies. After shopping, he is whisked back to the temple roof for the second half of the game, to find the remaining artifacts and return them to the crypt.

PLAYING TIPS

The monsters take increasingly more hits as the game develops, so make sure you keep improving the weaponry.

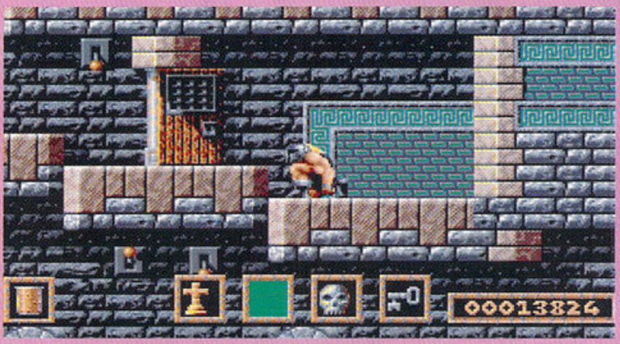
Experiment with the various switches, the effects often vary in combination.

Also try firing sideways from the ladders.

You can walk through mace traps undamaged if you have a shield (four stars circling around Herc').

Read every message given on the green bar at the very base of the screen.

The three pockets of Hercules



Hercules can carry up to three different objects. To access his backpack pull down on the 'stick and press fire. Four windows will appear one of which will be highlighted. The highlighted window is the drop window. To pick an object up, crouch and display the backpack when you are standing over it. Then, cycle the highlight along the windows until it is either on an empty window (see picture) or an object you want to drop. Let the joystick centre and you've got it.

If you don't know what makes the Amiga the best computer for sound and music, this program will demonstrate to you the thing that's the key to Amiga sound – the sample. A sound sample is a digitised version of a real sound that the computer can play. It is not a recording.

What it really consists of is a set of numbers in memory (which is what everything is like inside a computer). How can you get into samples and change them then? Simple, you use this program!

GETTING STARTED

Once you have setup a 'not so blank' disk you can boot up the machine with it. The program will automatically load when you reset the computer – then press CTRL and the two 'Amiga' keys that are on either side of the space-bar simultaneously.

When *Sample Editor* has loaded, it has to load in some samples for you to manipulate. There are no samples on its own disk (that would have meant more disk swaps when making the boot disk). Instead there are a couple of samples on the Coverdisk.

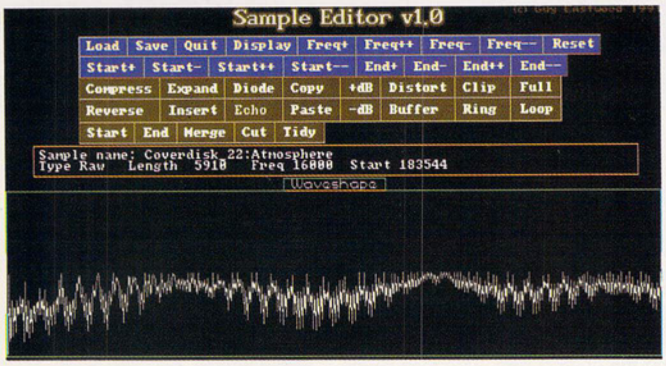
Wait for the drive light to go out, and then insert the disk with

Sample Editor **doesn't work straight from the Coverdisk – it has to live on its own disk. Even if you don't know a thing about the Workbench or CLI, we've made it a snap to do. It's a ten minute job from start to finish.**

1: First, insert Workbench and turn your machine on.
2: Get a fresh disk or one that you don't mind erasing and insert it once Workbench has finished loading (the disk drive light goes out).
3: Click once on the blank disk's icon (it will usually be called DF0:BAD, because it hasn't been formatted yet) and let go. The icon will now be highlighted.
4: Press the right-hand mouse button, move the pointer to the top left of the screen and select the middle menu which is labelled 'disk'. Two options will appear – move the pointer down to 'Initialise' and let go of the mouse button.
5: After a certain amount of disk swapping your blank disk will be labelled 'Empty'. Wait until the drive light has gone out again. Do not rename the disk to anything else.
6: Take out your blank disk and insert the Coverdisk. Double-click on its icon and a window of

SAMPLE EDITOR

GUY EASTWOOD PAL ONLY



samples on (some people will already have collections of samples). Wait until the drive light goes out again, and press the right-hand mouse button. A list of available sources will display. Let go of the mouse button and move the pointer up and down the list until you get to the name 'Coverdisk_22'. Press the left-hand mouse button, and the disk's contents will be displayed.

The two samples on the Coverdisk are 'Atmosphere' (taken from the Oktalyser PD samples disk) and 'Two-Are-Wonderful' (which is used in the Gods demo's musical soundtrack). Click on one or the other of these, which will make the file name appear at the bottom the requester box. Then click on 'OK' to load the sample.

USING THE PROGRAM

After any sample has loaded, it makes sense to click on the 'Reset' option. This will clean up any clutter in the sample, and forces the program to set up the sample's start and end points in memory properly. If you mess up a sample, this option will restore it to the way it was before you started mucking with it. When you select other options, the name is displayed in the top left of the screen to show that the computer is busy.

To play a sample, just hit a key. Stabbing the keyboard will cause the sample to keep starting. Ch-ch-ch-check it out! If you want a sample to play and repeat, click on the 'Loop' button. Click again to turn it off.

MAKING A DISK

the contents will appear.

7: Move the pointer to the icon labelled 'Install Sample Editor'. Press the left mouse button down and keep it pressed. Move the mouse pointer to the icon marked RAM. Let go of the mouse button and wait until the disk drive light goes out.

8: Close the Coverdisk window by clicking once on the little square gadget in the top left corner. Take out the Coverdisk (the icon will disappear) and insert the Workbench disk.

9: Double-click on the RAM icon. A window will open, and inside it will be the Install Sample Editor icon. Double click on this with the left mouse button.

10: The Install program will now copy some of Workbench into memory. When the computer asks you to insert your blank disk, do what it says and insert it. The Workbench files will be copied on to the blank disk.

11: After a while the computer will ask you to insert the Coverdisk, so do it. The Install program copies some of the Coverdisk files into memory.

12: Again your machine will request you to insert the blank disk into drive DF0. (Readers with more than one drive: this is the main internal drive, where you first booted Workbench from.) After you've put it in, the Install program will set up your blank disk and finish.

13: If you want to read the programmer's documentation then insert the Coverdisk, double-click on it and double-click on the Readme.Doc icon.



The program which installs *Sample Editor* is fully automatic and tells you what's going on while it is doing its job

VILBM

ERIC GRAHAM PAL/NTSC

Ever wanted to get a picture to display from Workbench? Every time a paint program saves a picture, the icon will demand that you put the paint program back in the disk drive. Infuriating.

If you have *Vilbm* (View Interleaved Bit Map) handy, you don't have to put up with the chore. Simply copy it onto the disk with your pictures on by booting up with Workbench, going to the CLI or Shell and typing:

```
COPY FROM COVERDISK_22:c/VILBM TO nameofyourdisk:
```

After you have swapped the disks, *Vilbm* will be on the disk with your pictures. Now select the picture icon (by clicking on it once with the left mouse button) and select info from the Workbench menu. The info menu will appear. Change the default tool to:

```
:VILBM
```

And then click on the 'Save' button. Now every time you click on the icon, Workbench will read in the *Vilbm* program, which will then load the picture. To stop looking at the picture and get back to Workbench, just press the left mouse button.

As well as picture files (which can be in any format, including HAM mode) *Vilbm* will also cope with text files that have icons. Simple when you know how, isn't it?

PP MORE

NICO FRANCOIS PAL/NTSC

If *Vilbm* can cope with text files, why do I use *PPmore* to display text files on the Coverdisk? *Vilbm* won't let you dump files to a printer – and quite a lot of our readers have printers, which means they can have a copy of the on-disk instructions when using the program.

The file has to be copied to the disk which contains your text files, in a similar manner to that used by *Vilbm.* That is:

```
COPY FROM COVERDISK_22:c/more
TO nameofyourdisk:PPMORE
```

Why is *PPmore* called more on the Coverdisk? This is done in case the Readme.doc text file (the instructions for Sample Editor) get copied to a system which doesn't have *PPMore.* But *PPMore* is the proper name, which is the reason why I use it here.

After that, you have to alter the icons info to read:

```
:PPMORE
```

Then click on the save button. One final point. The *PP* in *PPMore* stands for *Powerpacker,* which is another program written by Nico. *PowerPacker* can crunch files to a smaller size than normal – and naturally, *PPMore* can read such crunched files.

PIC OF THE MONTH

PAUL SEALE PAL/NTSC



Sorry for the interruption in last month's issue – there was no disk space left for this ever-popular slot. The best picture this month is an atmospheric entry from Paul Seale of Burgess Hill. No? Think that you can do better? Then send you entry to: Pic of the Month, *Amiga Format*, 30 Monmouth St, Bath BA1 2BW

Using Your Coverdisk

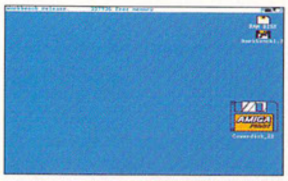
DISK PROBLEMS?

If you have a problem with the disk – and you're sure the disk is in full working order – then you may need a little help. We cannot normally give out advice over the telephone – but if you are completely stuck, Pat McDonald may be able to deal with any problems you may encounter. Please understand, giving this sort of advice is time-consuming and we are very busy people, so only call if you really have to and do be considerate if we can't talk to you just then. If the problem is particularly complex it is better to send it to us in written detail. It will then be dealt with in the Workbench pages of the magazine.

1. Always write-protect your disk. Move the tab so a hole is showing.
2. Copy the Coverdisk and use the copy not the original. Instructions for copying the disk are given below.
3. Read the instructions when using the programs.

BACKING UP YOUR DISK

It's worthwhile using a copy of the Coverdisk – indeed any disk – and keeping the original safe. This may sound like a complicated task suitable for techno-buffs only, but it is surprisingly simple, provided you follow these instructions carefully:



First turn on your machine and load the Workbench (one of the disks everyone gets with their Amiga). Once the Workbench screen appears and the drive light goes out, remove your Workbench disk and insert the Coverdisk. Once the drive light has gone out your screen should look like the above.



Next, move the mouse pointer to the Coverdisk icon and click once with the left mouse button – the icon will highlight. Press the right mouse button and keep it down. The words 'Workbench', 'Disk' and 'Special' will appear at the top left of the screen. Move the pointer to the word 'Workbench', and a menu will drop down. Select the 'Duplicate' option: you should have got this far.



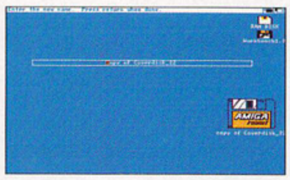
The computer will ask you to insert the Workbench disk again – it needs to read the command to copy disks. After you've done this, a boxed message (a requester box) will appear, asking you to insert the source disk. Insert the Coverdisk again and click on the OK option with the left mouse button.



After the computer has read part of the Coverdisk, it will again display a requester box asking for the destination disk to be put into df0. Put in the disk that you want the Coverdisk copied to. This procedure of swapping disks will continue until all the disk has been duplicated.



Eventually, you will end up with two Coverdisk icons, one of which has the name 'Copy of Coverdisk 22'. Click once on this with the left mouse button to highlight it. Bring down the 'Workbench' menu again (by holding down the right mouse button and moving the mouse pointer to the top left) but this time select 'Rename' from the menu. Let go of the right mouse button to select the Rename option.



The name of the disk will appear in an elongated box – you don't need to insert Workbench again because the Rename command is built into the machine. Press the 'Del' key (next to the 'Help' key) to remove the 'Copy of' part, and press return key to make the computer put the new name to copy.

DISK NOT WORKING?

We duplicate over 100,000 disks every month. Out of all those, obviously a few will be faulty. If the disk or any of the programs will not load or run properly, there may be a problem. Don't panic!

First try using the *DiskDoctor* utility on your Workbench disk to rescue it before sending it off for a replacement. In-full details of *DiskDoctor* can be found in the user's manual that came with your machine.

However, if it transpires that your Coverdisk is faulty, you should send it back INCLUDING AN SAE for a free replacement within a month of the cover date to:

Amiga Format
May Disk
30 Monmouth St
Bath BA1 2BW

Remember to include that stamped, addressed envelope!

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(we cannot use programs larger than 200K; shorter submissions, under 100K, stand the best chance of publication). It is a:

☐ Game
☐ Business utility
☐ Music program
☐ Novelty
☐ Technical tool
☐ Art program
☐ Educational
☐ Other

Brief description..

....

....

....

Checklist **(please tick):**
☐ **Stamped-addressed envelope for return**
☐ **README.DOC explanation file on disk**
☐ **Printout of README.DOC file (if possible)**
☐ **Name, address, machine type written on label**
☐ **Disk certified virus free**

IMPORTANT **Please sign this declaration:**

This program is submitted for publication by *Amiga Format*. It is wholly my own work and I agree to indemnify Future Publishing against any possible legal action should copyright problems arise.

Signed ....
Date ....

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2. Create a file called README.DOC on the disk which explains exactly how to use your program. Try to make it humourous and informative - a good README.DOC gives a program a better chance of going in.
3. Fill in this form, sign it, and send it with your disk (and a printout of the README.DOC file if possible) to: Coverdisk Software, *Amiga Format*, 30 Monmouth Street, BATH BA1 2AP. You could win a share of up to £800 prize money.

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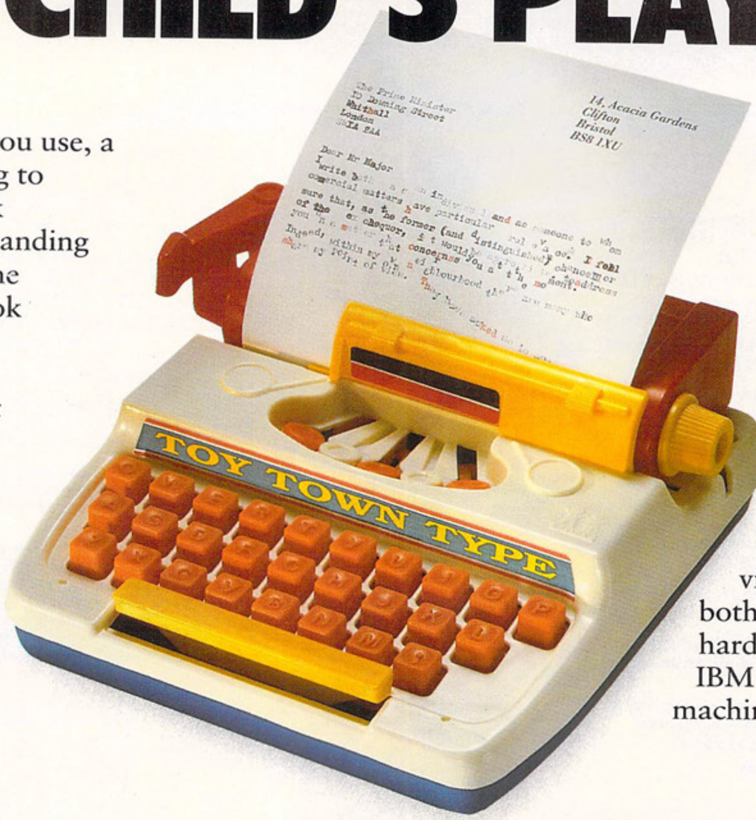
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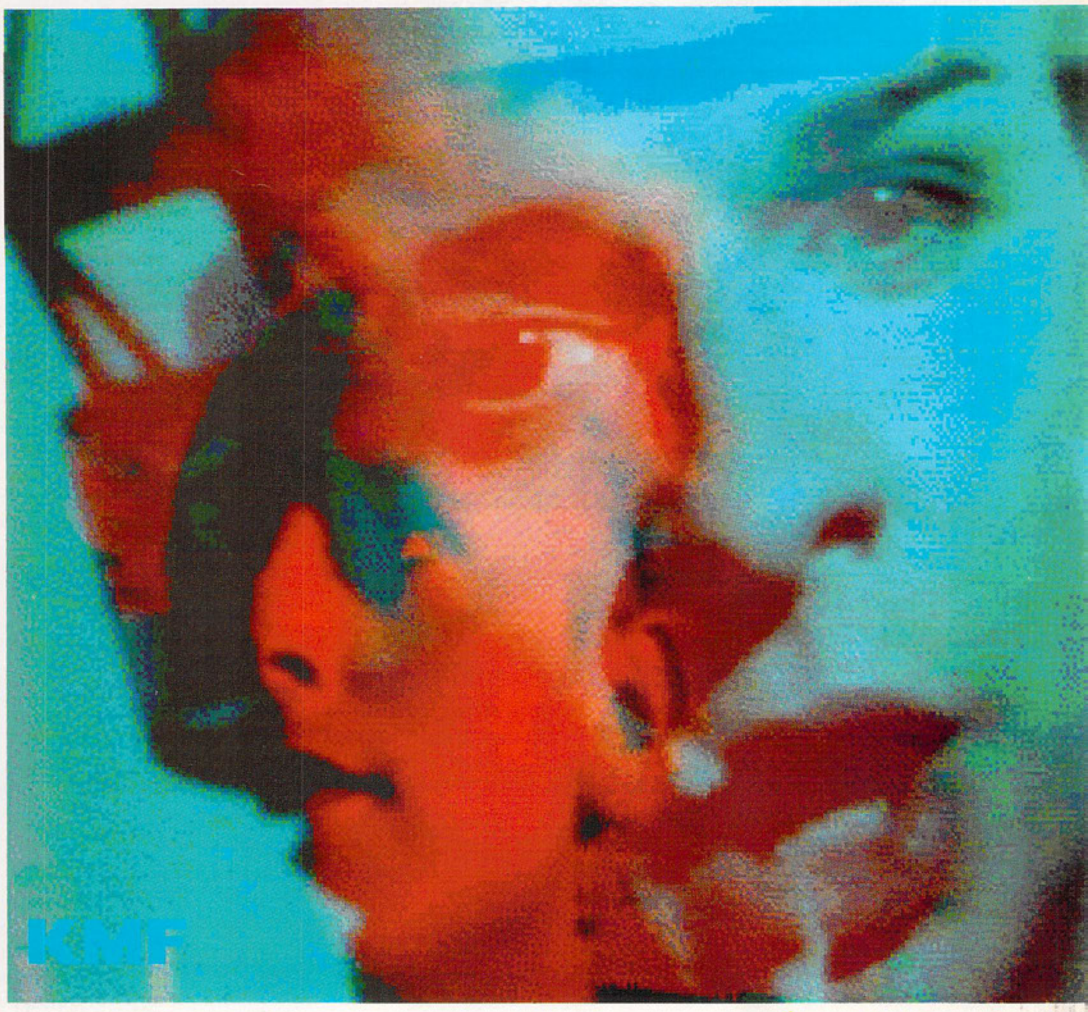
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AF/03

Sample It, Scan It, Grab It



If you want to make the most of your machine's graphic power but you aren't overflowing with artistic talent, the video digitiser can help you to produce your own original works of art. Grab it, use it, change it – and admire it! **JASON HOLBORN** tests all the video digitisers on the market and recommends the best.

Everyone knows that the Amiga can produce some pretty stunning graphic displays, but unless you're blessed with the talents of a modern-day Van Gogh, producing even a half-way decent picture can seem an almost impossible task. Packages like *Deluxe Paint* make that task somewhat easier, but there's still a weak link that even the most talented paint package programmer can't overcome – the user. Just like a pencil or a brush, the paint package is only as good as the person that uses it!

But – as the old saying goes – if you can't beat them, then cheat. In the case of churning out graphics, the solution lies in a little bit of silicon trickery called the Video Digitiser. Simply by feeding the output from a camera or VCR into a digitiser, you can literally 'grab' the images you see on your television screen and pull them into your Amiga. Once they're in, you can then doctor them to your heart's content, producing the kind of effects that would have made the BBC turn green with envy little more than a few years ago.

Get the Gear

Buying a digitiser is only half the story, however – it's also important that your digitising set-up is of the same standard as your digitiser. After all, even the most powerful digitiser will only produce decent results if it is fed a decent video signal to work with. If the source signal is sub-standard, then your digitised images will be sub-standard.

A decent set-up becomes particularly important if you're grabbing images from real-life. For starters, it's worth investing in a decent camera (either colour or mono). Mono cameras can be picked up for as little as £75, but it's worth spending a little extra on a camera to obtain the highest resolution – higher resolution means more detail! On average, you can expect to pay about £200 – don't be put off by the price, a decent camera will vastly enhance the quality of your digitising.

For the digitiser to pick out the maximum amount of detail, it's important that the object to be digitised is well lit. This isn't as complicated as it sounds – just a couple of tabletop lamps pointing at the object will do the job. However, try to avoid using standard household bulbs. These can often result in your images having a sort of red tint to them. A better bet are 'daylight' bulbs which are available from photographic and art suppliers at about £5 a throw. These reduce this effect substantially.

Anyway, enough technicalities: let's take a look at what digitisers are available. We've used a test image across all the digitisers to give you a fair comparison of how they work.

Digiview Gold ★★★★

NewTek/HB Marketing ■ 0753 686000 ■ £149.95



If you're looking for pedigree in your digitiser, then NewTek's acclaimed DigiView is about as well-bred as you're likely to get. It's been available for a few years now, but it is still the best-selling digitiser on any machine. Indeed, NewTek claim to have sold DigiViews to just about every country on the Earth, including Japan and the Soviet Union.

DigiView cannot grab from a colour video source. Instead, it employs a system of coloured filters that must be placed in front of a monochrome (black & white) video camera. Three 'exposures' must be taken, one each through the red, green and blue filters. These three exposures are then combined to produce the resulting image.

If you're after speedy results, then forget about DIgiView. Digitising at its highest resolution, it can often take several minutes before the resulting image is finally displayed. Don't be put off, however. The old saying goes 'the best things in life come to those who wait' and this is most certainly true of DigiView. Put simply, no other digitiser even comes close to DigiView where image quality is concerned.

If you've got access to a mono video camera, then DigiView is the one to go for. However, if you're intending grabbing screens from your favourite video tape, then you may want to look elsewhere.



★★★★ ColourPic

JCL ■ 0892 75791 ■ £399



At the opposite end of the pricing spectrum is ColourPic, a home-grown digitiser from JCL Marketing. ColourPic isn't the only digitiser that JCL produce – they also market a more expensive unit called SuperPic, which combines the same digitising power of ColourPic with a genlock for £499.

All that money certainly buys some pretty impressive hardware – the basic ColourPic boasts a built-in 192K frame buffer which can be expanded to a massive 512K with a separate RAM expansion module. The frame buffer allows SuperPic to grab a full-colour image directly from any 'composite' video source (a normal TV, video or video camera) in real time.

Because of this, there's no need to mess around with colour filters – just connect up your colour video camera, select the 'Import' option and a full colour grab is eventually displayed. The image doesn't appear instantly, ColourPic must first carry out a fair bit of jiggery-pokery. The frame buffer takes a 'snapshot' of the incoming signal which it then works on, so there's no need to pause the signal.

Image quality is certainly pretty impressive, but the relatively low resolution of colour video cameras and home VCRs means that the images lack the kind of detail you'd obtain from using a mono camera. Of course It is possible to buy high resolution colour cameras and recorders (Hi8 and S-VHS formats, for example), but these are currently rather expensive. In all, ColourPic is perhaps better left to the real professionals.



VIDI Amiga ★★★

Rombo ■ 0506 414631 ■ £99.95

Cheap it may be, but VIDI Amiga certainly isn't a slouch where features are concerned. It's available in several configurations, but the basic VIDI is mono and low resolution only. Sounds pretty unimpressive, I know, but what really makes VIDI special is that it works in real time. Unlike DigiView, you can connect it up to a 'live' video signal and grab frames in a 50th of a second. As a result, VIDI is ideal for grabbing mono artwork from video tape.

One particularly fun feature of VIDI is its animation facilties. Depending on the amount of free RAM in your machine, VIDI will automatically grab as many frames into memory as is possible. On a 1Mbyte Amiga 22 frames are possible, but over 150 are available on a 9Mbyte Amiga. To create the illusion of movement, VIDI can then rapidly flick through these frames. Both the contrast and brightness of the incoming video signal can be altered directly via two controls sticking out of the back of the hardware. Because VIDI is real-time, you don't need to connect up the video source to a monitor to check to make sure these levels are correct – just alter the controls while grabbing and the changes will be displayed onscreen almost immediately.

VIDI may not be the most advanced digitiser available, but it's certainly the most approachable for first time users. Unlike most of the competition, you don't need expensive bits and pieces like video cameras and multi megabytes to get started – Vidi will happily work on a standard 512K Amiga 500 connected to nothing more than a home VCR.



VIDI Chrome ★★★

Rombo ■ 0506 414631 ■ £19.95

£20 for a colour video digitiser? Seems too good to be true, doesn't it! Well, unfortunately it is too good to be true – *VIDI Chrome* is actually nothing more than a software upgrade for VIDI Amiga that allows it to grab colour images. Obviously VIDI can't handle a colour video signal directly, so instead it uses the same system of coloured filters used so successfully by DigiView. Building up a colour image using filters can often be a rather 'hit and miss' affair, but the process is made somewhat easier because you can alter the brightness and contrast of each separation before you finally decide to move onto the next. Once all three exposures have been grabbed, *VIDI Chrome* automatically builds up the final colour image.



Grabbing a colour image with *VIDI Chrome* can take little more than a couple of seconds, which makes the time DigiView takes to do the same job look like something of a joke. Image quality is also pretty impressive, with plenty of colour and a fair bit of detail. *VIDI Chrome* images are perhaps not as well defined as they could be, especially when you compare *VIDI Chrome* grabs with those produced by DigiView.

If you already own VIDI Amiga, then you'd be a fool not to splash out the extra £20 for *VIDI Chrome*. If, on the other hand, you're starting out from scratch and want to use VIDI to grab colour images, then DigiView would probably be a better bet. This is a slightly less capable system, if very similar.



★★ Videon

NewTronic/Power ■ 0234 273000 ■ £249



From first impressions, Videon certainly looks like a winner. However, there's a few points that you should realise – firstly, although it can grab from a colour video source (colour camera, VCR etc), it is not real-time. This basically means that the image has to be still. If you're grabbing an inanimate object with a colour camera, then this isn't too much of a problem, but don't think that Videon will grab from a moving video source. Sure, you can hit the pause key on your VCR, but the results are often far from satisfactory.

Videon offers two grabbing modes – slow and fast scan. Slow scan produces the best quality results, but it can often take longer than DigiView to build up the image. Even fast scan is not particularly fast – on average, you can expect to wait at least 30 seconds before an image finally appears on your monitor screen.

One nice feature of Videon is that it allows you to view the incoming video signal 'live' on your Amiga monitor simply by pressing a button on the front of the digitiser unit. This can be particularly useful for monitoring the brightness and contrast of the incoming signal. Once you're happy with the signal (which can be adjusted), press another button and you're back to the Amiga display.

Videon is certainly capable enough, but you'd probably be better off spending the money on a DigiView unit and a mono video camera. It's nice being able to grab direct from a colour video signal, but this is rendered almost useless by the amount of time that is required to grab an image.



Framegrabber 256 ★★★★

Progressive Peripherals/Marcam ■ 081 941 6117 ■ £599



If you're loaded and money is no object, Progressive Peripherals' FrameGrabber256 may just be the digitiser you've been looking for. For your £600, you will get a gadget generally regarded as one of the best digitisers available for the Amiga. We reviewed it way back in *Amiga Format* 7, but even now the FrameGrabber continues to be a digitising favourite.

Like JCL's cheaper ColourPic, the FrameGrabber is a true real-time colour digitiser, which goes some way to explain its high price. It uses exactly the same system as that employed by JCL's unit – a frame buffer stores the incoming video signal within its own internal memory which is then downloaded into the Amiga's memory. As a result, the FrameGrabber can handle grabbing from both pre-recorded video tape and from a colour video camera.

The quality of picture is very high indeed, but sometimes lacks the detail of those produced by slower digitisers like NewTek's DigiView. Of course what you lose in definition, you more than make up for in both ease of use and speed. If you need to grab high-quality images but can't be bothered to mess around with colour filters, then the FrameGrabber is the ideal choice.

If your budget can't quite stretch to cover the cost of a colour video camera, then you can also use a mono video camera and filters to grab a colour image. Obviously you then lose many of the advantages of real-time digitising, but it's always nice to know that the option is there.

FrameGrabber's main competitor is undoubtedly JCL's ColourPic, both of which have very similar facilities. While the FrameGrabber is more expensive, it consistently produces much higher quality results than SuperPic with a minimal amount of fuss.



Use It!





DigiPaint's 'colorize' feature allows mono images to be coloured as if by tinting.

A diskful of digitised images is all very nice for impressing your auntie Mavis, but the real fun doesn't start until you begin to play around with those images. All digitisers can save their images in standard IFF format, so just about any art package can be used for a bit of basic tarting up and messing around. However, it's important to make sure that the digitiser you buy supports the image format used by your paint package – HAM images from VidiChrome aren't compatible with *Deluxe Paint*, for example.

If you don't already own a paint package, then there are several available that are ideally suited to working with digitised images. By far the best HAM system for this purpose is *DigiPaint 3*, which includes a fair old selection of tools specifically designed with digitised images in mind. Particularly impressive is *DigiPaint*'s 'colorize' option which allows you to add colour to mono images by overlaying coloured tints.

For heavyweight image processing, nothing even comes close to the facilities offered by Progressive Peripherals' *PIXmate*. This is a totally wondrous piece of software that includes everything you're ever likely to need where image manipulate is concerned. You can't directly modify images in the same way as you could within a package like *Deluxe Paint* – instead, *PIXmate* uses image processing algorithmns that mathematically manipulate images.

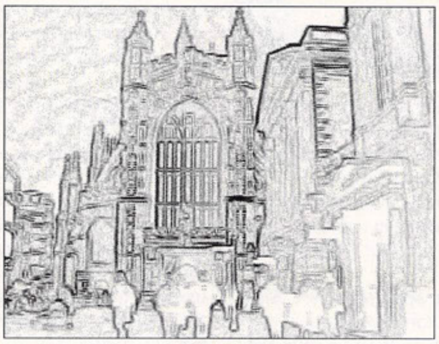
These algorithms, which were originally developed by NASA to clean up images sent back to Earth by their deep-space probes, allow you to not only clean up digitised images, but also to produce many effects including posterising, averaging, blurring, plus a whole lot more besides.

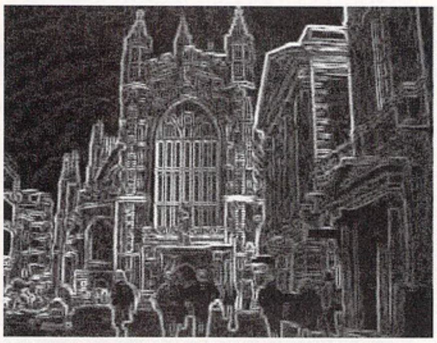
PIXmate is also great for converting artwork between different formats. You can convert HAM pictures to anything from 32 colours to just two, high resolution images to low resolution, medium to high, low to medium – in fact, just about any format you can think of. Can you afford to be without it? ■

PIXmate has many image processing features, including pseudo colouring and edge detection.



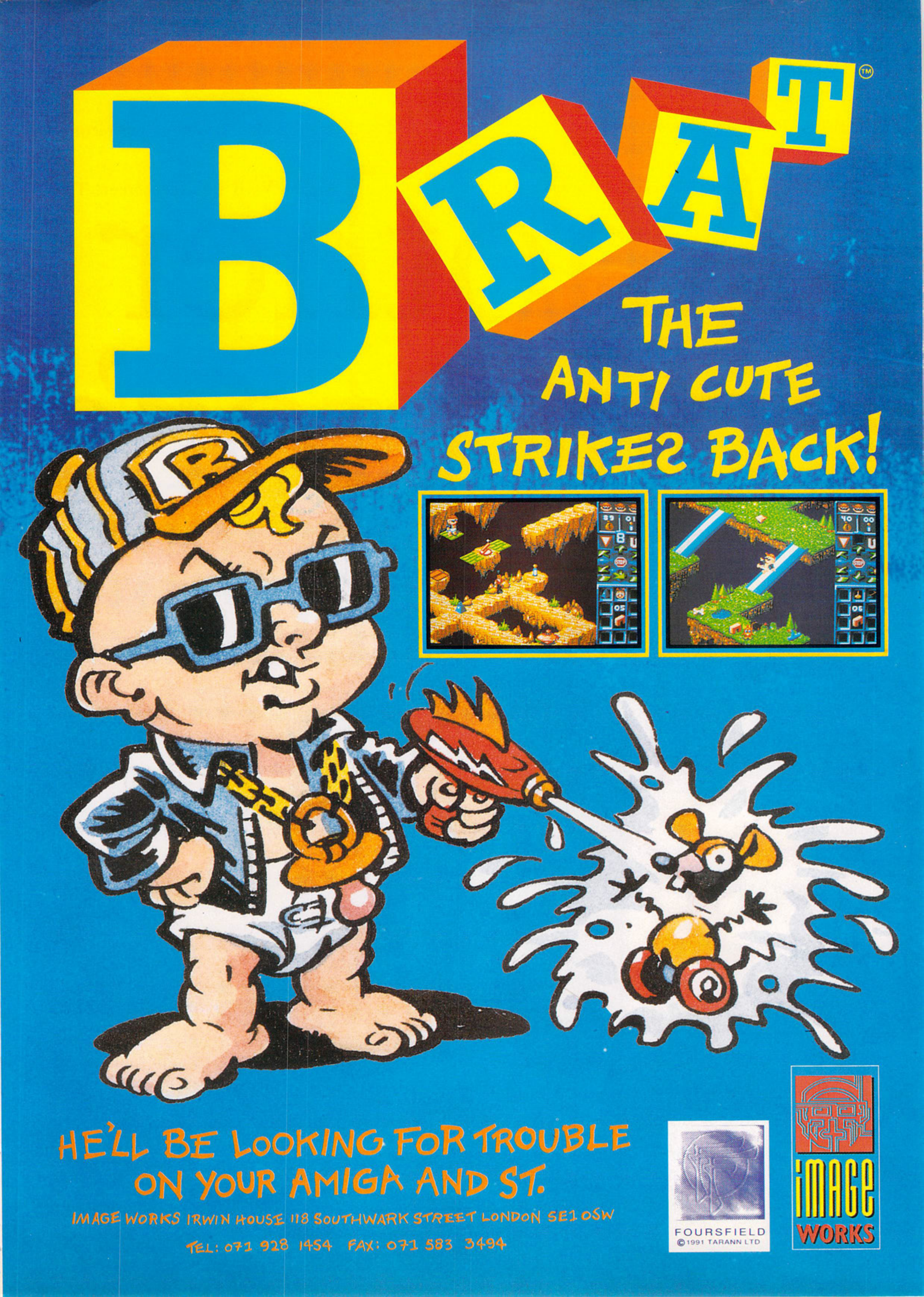






FEATURES CHART	DigiView	ColourPic	VIDI Amiga	VIDI Chrome	Videon	Frame Grabber
Colour?	Yes	Yes	No	Yes	Yes	Yes
Grab from colour video source?	No	Yes	No	No	Yes	Yes
Real time? *	No	Yes	Yes	No	No	Yes
Grab Colour images in real time?	No	Yes	No	No	No	Yes
HAM Digitising?	Yes	Yes	No	Yes	Yes	Yes
Screen Modes **	L H I	L H I	L	L I	L H I	L H I
Overscan support?	Yes	Yes	No	No	Yes	Yes
Memory Requirements	1 Mbyte	512K	512K	512K	512K	1 Mbyte
Contrast/Brightness controls?	Yes	Yes	Yes	Yes	Yes	Yes
Image processing tools?	Yes	Yes	No	No	Yes	Yes
Price	£149.95	£399	£99.95	£19.95	£249	£599

* A digitiser is designated 'real time' if it can grab from a moving video image, without first pausing the source device.
** Screen modes – L = Low Resolution, H = High Resolution, I = Interlaced


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Scan It, Grab It, Sample It

A few years ago, electronic music was the playground only of the serious musician. High-technology gadgets such as sequencers, synthesizers and in particular samplers were expensive items. The enormous asking price put them well out of the reach of even the most enthusiastic hobbyist. However, the arrival of fast, fairly powerful and relatively cheap 16-bit home computers has brought the world of sampling within the range of the less wealthy amateur musician.

The Amiga's powerful sound chip and proficient operating speed make it the ideal home machine to get into the world of sampling and electronic music. Good or professional-quality results can now be achieved with little experience and considerably less money than was previously required. The only thing is, which system is the best to start out on?

Advertisers' blurb about 'rates', 'loops' and 'edit windows' isn't much help either. Step forward *Amiga Format* – to the rescue! This guide to the top samplers should help you make up your mind!

Crossfade What?

For those of you who are new to the subject, it may be an idea to explain the theory behind sampling. Samplers are basically a method of recording sound electronically. You can record a sound from a record, tape, CD, video or a microphone and store it in your computer.

Once you have the sound you can perform all sorts of tricks, such as clipping out phrases, reversing sounds and fading them in and out. When you've played around with it to your heart's content, you can save it out to disk to use in other music systems or your own programs. Before we start off the reviews, here are some terms you will need to know.

SAMPLE RATE: This is the speed that sounds are recorded, usually given in samples or cycles per second (Hz). This means the number of times that the sampler gathers data, so the higher the rate, the better the sound quality.

LOOPS: This is where a sound or section of a sound can be repeated over and over again.

MIDI: Musical Instrument Digital Interface. MIDI is a standard system for connecting musical instruments, samplers and sequencers together.

WAVEFORM: This is the way a sound is portrayed once you have sampled it. All editing is carried out on a waveform display.

TRIGGERS: This defines how you start to record a sampler.



Get a sampler and the whole world of music opens up before you: but the wealth of Amiga samplers provides the music beginner with something of a dilemma. Which one do you choose? **MAFF EVANS** gets together the top ten samplers available and tests them all out.

CUT AND PASTE: In order to edit a sound, you must be able to chop sections out and stick them in somewhere else. This is what 'cut and paste' means. Simple, eh?

IFF: Stands for Interchangeable File Format, a standard file system whereby samples can be loaded into other programs.

THE REVIEW SYSTEM

Samplers are a pairing of hardware and software: our test tries both.

- Each sampler has a short section outlining the main points of the package, including the sound quality, the range of features included, how easy it is to use and a general impression of the package as a whole. At the end of each piece, a novice sampler gives an opinion on the system.
- The second section is a cross comparison, with all the software being tested on one piece of hardware and all the hardware tested on one piece of software, to see how well each part of the package copes.

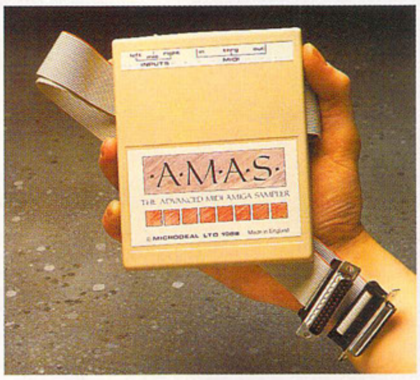
Audio Engineer ★★★★★

RamScan/HB Marketing ■ 0753 686000 ■ £199

Aimed at the more serious user, this is a complete hardware/software package based around the superb GSoft sampling hardware and a version of *Audiomaster III*. It's not cheap, but it's powerful!
SOUND QUALITY: Excellent. Easily the best quality on an Amiga.
FEATURES: All the editing and effects options you could wish for, as well as a superb looping system which allows you to set a sequence of multiple loops within a sample.
EASE OF USE: Despite its technical appearance, the program is fairly self-explanatory and easy to use.
OVERALL: The high asking price may put this out of the range of the novice sampler, but for more serious hobbyists it's worth the dosh.

BEGINNER'S VERDICT: No constant referring to pathetic manuals, no peering at tiny soundwaves (these guys take up over half the screen) and no annoying fuzz – just proper facilities (even freehand editing), proper documentation (if you need it) and proper sound.





★★★ AMAS

Microdeal ■ 0726 68020 ■ £99.95

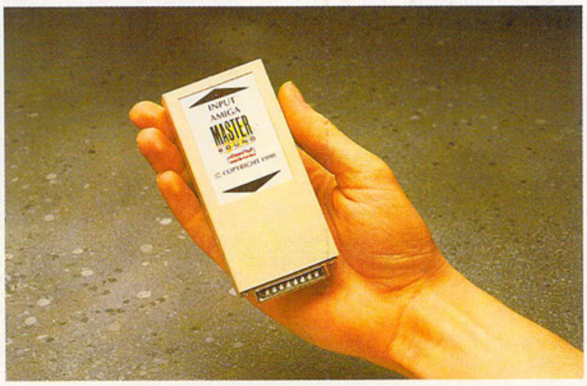
Microdeal's first sampler comes equipped with a built-in MIDI interface – hence the 'Advanced MIDI Amiga Sampler' name – and has a range of options that allow you to play samples from a MIDI keyboard.
SOUND QUALITY: The facility to turn off the LED filter means that pretty clear samples are available, but space is quickly eaten up.
FEATURES: A lot of editing tools and MIDI options provide the user with a wide scope for doctoring and playing sounds.
EASE OF USE: The icons and the fiddly sub-options are rather too confusing.
OVERALL: A decent enough package considering you get a 'free' MIDI interface, but a mite too difficult to get into.

BEGINNER'S VERDICT: It looks good but works in a klunky unintuitive manner. The control panel icons don't represent what they do and editing a waveform will take a lot of practice before it becomes second nature.

Mastersound ★★★

Microdeal ■ 0726 68020 ■ £39.95

Alongside the more expensive AMAS, Mastersound is Microdeal's bid for the cheaper end of the sampler market. The package is a simple single-input, stereo device supplied with the editing software and an input lead.
SOUND QUALITY: Pretty average at low rates, but very clean and clear results can be obtained when the rate is pushed up. However this tends to gobble up memory!
FEATURES: All the standard edit tools are there and the program also includes a simple, if a little throwaway, sample sequencer.
EASE OF USE: Uses similarly confusing icons as AMAS, and the fiddly zoom mode is a tad annoying. Also, the sequencer is far from self-explanatory.
OVERALL: A 'cheap and cheerful' package which produces good sounds... if you're very patient.



BEGINNER'S VERDICT: I found this pretty confusing at first, but even when I'd sussed out what was going on, using the zoom window for looping was still a pretty frustrating way of operating.

Amiga Micro Sampler ★★

Datel ■ 0782 744324 ■ £69.99



Datel have come up with a successor to their Sample Studio series, this time with a more compact piece of hardware. The program disk comes with a sampling program and a simple sample sequencer.
SOUND QUALITY: Not too great. The sound tended to come out rather muffled and distorted easily.
FEATURES: Not too many features on the editing front, with some pretty useless tools such as the pseudo 3D wave display. The 'Jammer' sequencing program is quite fun.
EASE OF USE: Very few on-screen explanations, which makes reading the rather thin manual essential. The lack of a monitor while sampling also causes a few problems.
OVERALL: A pretty bog-standard package, which could be confusing for the beginner.

BEGINNER'S VERDICT: Even though the manual describes every option on the program, it was still quite a chore to get into the flow of the program. Even then it was easy to select the wrong function by accident.

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Feature Comparison	Professional Page 2.0	Saxon Publisher 1.1	PageStream 2.1
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Compugraphic Font Compatible	Yes	No	**Yes**
Professional Draw Import/Edit	Yes/No	No/No	**Yes/Yes** *edit ProDraw clips in PageStream!*
Outline Fonts on Screen	Yes *only Compugraphic fonts*	No	**Yes**
Draw Bézier Curves	No	Yes	**Yes** *draw Bézier curves and Bézier polygons*
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★ ★ ★ Stereo Sampler MkII

Trilogic ■ 0274 691115 ■ £39.95, plus £54.99 for Audiomaster III software



The latest version of Trilogic's sampler comes as a simple box equipped with a through-port for your printer, a stereo input and a gain dial. Also included is a simple beginner's piece of software and (gasp) an input lead!

SOUND QUALITY: Very good. In fact the quality achieved is very close to the more expensive systems.

FEATURES: The supplied program contains only the rudiments of sampling and editing sounds, but Trilogic can also supply the package with the superb *AudioMaster III.*

EASE OF USE: Extremely simple. The program is very much intended for beginners and works well in that respect.

OVERALL: A high-quality piece of hardware, but the software will soon need upgrading to a more powerful system – like *AudioMaster.*

BEGINNER'S VERDICT: Such a fine bit of hardware should really be backed up by software that allows for more than simple cut-and-paste editing. But it does mean that you can get to grips with high-quality sampling in a matter of minutes.

Technosound ★ ★ ★ ★

Centresoft ■ 021 625 3388 ■ £34.99 full package, £24.99 software only

Set as an 'entry level' sampler, Technosound comes as a complete beginner's package with hardware, lead, program, two demo disks, and a tutorial cassette.

SOUND QUALITY: Not as crisp as the more expensive samplers when used with the bundled software, but superb with a decent program!

FEATURES: A wide range of editing and effects tools, but the memory limitation are sometimes restricting.

EASE OF USE: Self-explanatory controls and easy-to-use windows mean that the program is pretty straightforward, even for beginners.

OVERALL: Not really an 'all-singing, all-dancing' package, but an ideal way to get into the world of sampling.

BEGINNER'S VERDICT: The use of words instead of confusing pictures on the buttons made all the controls pretty easy to use. Also, the tutorial cassette provides a good introduction to the system.



★ ★ ★ Sound Trap III

Bytes and Pieces ■ 0253 734218 ■ £29.95, £54.95 Audiomaster II, £84.95 Audiomaster III

Probably the smallest sampling unit on the market, Sound Trap is aimed as a budget sampler, although higher-priced packages are available bundled with *Audiomaster III* or *II* for the serious user.

SOUND QUALITY: The software doesn't really cope too well with high frequency samples, and tends to distort and sound muffled at any other rate than high.

FEATURES: Not a huge amount, but for the price it contains all the functions that you would expect.



EASE OF USE: Very simple to use, but careful work is needed to achieve good results.

OVERALL: Not a brilliant package as it stands, but with the option of buying the system bundled with *AudioMaster* at a pretty cheap price it could be just the thing for the musician with a tighter budget.

BEGINNER'S VERDICT: Very straightforward to use, but just a little more explanation would have been helpful, if only to start me off on the right track.

PerfectSound 3 ★ ★ ★

Sunrize/HB Marketing ■ 0753 686000 ■ £59.95

Now in its third version, Perfect Sound comprises a simple black box with stereo phono inputs and a mini mic jack and the software disk. The program allows you to work with up to six sample banks at once.

SOUND QUALITY: Mostly good, but the occasional annoying hum creeps in from time to time, especially at high frequencies.

FEATURES: The six sample banks create interesting edit options and there's a fair amount of tools, but the whole thing seems a little simple.

EASE OF USE: Editing isn't as daunting as many systems, but the inability to work in zoom mode makes editing sounds very difficult.

OVERALL: A fairly comprehensive package with the only drawbacks being a few quirks in the editing system.

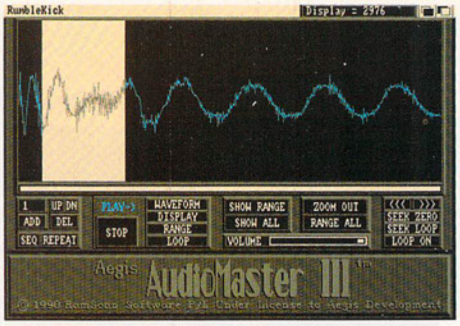
BEGINNER'S VERDICT: Undaunted by the icon/menu system I was able to progress quickly into Perfect Sound's more complicated editing facilities without much reference to the excellent manual.





CROSS COMPARISON

In order to get a real idea of the power and quality of both software and hardware, each piece of hardware was tested using the same software and vice versa. The hardware was tested using *AudioMaster III* due to its wide availability with packages and the software was tested on the Trilogic sampler since it acts pretty much as a standard piece with high-quality recording.



THE SOFTWARE...

AMAS



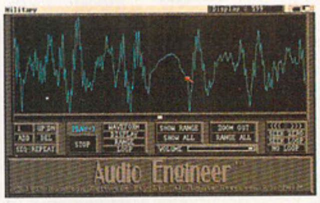
Setting up a decent input is a little fiddly and when you do record there is a quite audible crackle on the final sample. Also, the sound tends to emerge a little muffled when the clicks have eventually been removed. Coupled with the awkward editing, this makes AMAS look unfortunately dated, which is a great shame, since it actually has the potential to be quite a powerful system.

MASTERSOUND



When separated from its own hardware, Mastersound tends to lose a little sound quality. The sound is recorded well enough, but a clearly audible hum is evident in the quiet sections of samples. This is due to the filtering circuitry in the module – quite a feat at that price!

AUDIO ENGINEER



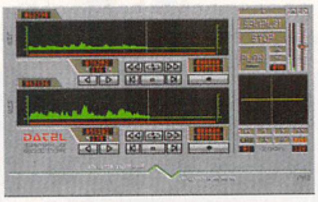
When used with such a good piece of software as this, all the hardware's crackles and pops are easily picked up! The input has to be carefully adjusted to avoid this little problem, but it still tends to creep in at times.

TECHNOSOUND



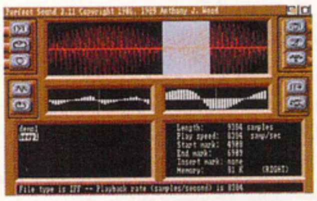
This software records sounds fairly well, but some background noise is also recorded, giving a rather crackly overall sound quality.

AMIGA MICRO SAMPLER



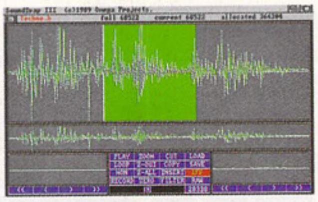
Unfortunately, the Datel program doesn't work a whole lot better without its hardware. There isn't as much buzz on the sounds, but the whole thing still sounds a touch muffled and distorted, especially with high frequencies.

PERFECT SOUND



The input is fairly difficult to control with the software, so a pay-off between volume and quality has to be found. Even at low volumes, though, a slight hum creeps in.

SOUND TRAP III



Not too good I'm afraid. The sound quality is pretty fuzzy, even at high rates. On the other hand, this IS only supposed to be an introductory program, so it's unlikely that too many people will be using it for a long time.

...THE HARDWARE

AMAS

The program actually has a preset option for the AMAS hardware, which yields very good results. However the need to input at very low levels means that some distortion of high frequency sounds occurs from time to time. For the most part this shouldn't cause a problem, but be prepared to do some careful filtering!

MASTERSOUND

Despite the fact that the Mastersound hardware caused massive incompatibility problems with the older *Audiomaster II*, the new version of the software seems to work rather well. The sample quality is clear with a slight whine only being audible on very quiet passages.

STEREO SAMPLER MK II

With a special offer to Trilogic owners, many users of that sampler will no doubt be upgrading to *AudioMaster III*. Very good samples can be obtained with careful input control, but a slight crackle still tends to creep in.

AUDIO ENGINEER

Audio Engineer is basically a version of *AudioMaster III* with a top-end piece of hardware. Unsurprisingly the sound quality is unrivalled, with crystal clear samples being possible with little effort. The price of the GSoft hardware is rather high at 200 quid... but it's well worth it!

TECHNOSOUND

Seeing as this is such a cheap piece of kit, the sound quality obtained through the hardware is incredible. Virtually no crackle can be heard on even the quietest sections of a sample. This makes the package the perfect choice for beginners, since they can upgrade the software and quickly obtain superb results.

AMIGA MICRO SAMPLER

The Datel hardware manages to cope with a wide range of sound frequencies quite well, producing a good copy of the input. However, an annoying whine tends to creep in, which is clearly audible on quiet sections of a sound.

PERFECT SOUND

Perfect Sound is another of the samplers with a preset option to handle the *AudioMaster* software. All you do is select it in the Sampler Config window and you can instantly record perfect samples. The quality is only rivalled by the GSoft hardware itself!

SOUND TRAP III

Despite its low price and tiny dimensions, Sound Trap III does itself proud. The sound quality is pretty good, with hardly any background sound at all. This makes it a viable choice for those who are a bit low on funds!

CONCLUSIONS

Without doubt, the best system is Audio Engineer, but the high asking price will put it well out of the reach of the novice sampling buff. If this is your position, then starting out with Sound Trap III with a view to expanding with more software later may be a good bet.

A good start for beginners is Technosound, since it provides an easy-to-use 'entry-level' system for you to get to grips with until you've found your feet, at which point you can upgrade to the wonderful *AudioMaster III* to achieve some almost professional results.

One point that was noticed during the compiling of this feature was the number of times that leads aren't included in packages. Anything less than a high-quality input lead could mean the difference between a pin-sharp sample or a messy buzz. Make sure you're properly equipped before you start!

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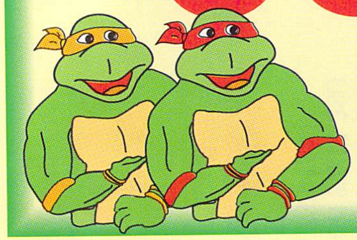


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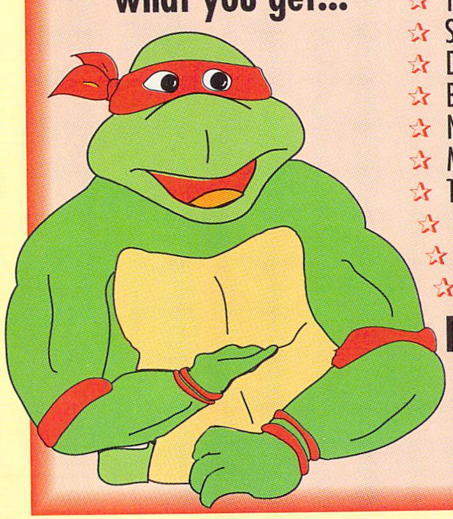
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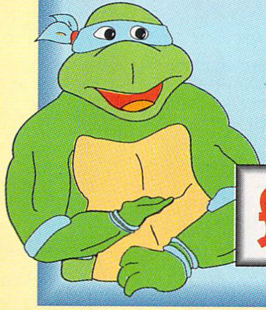
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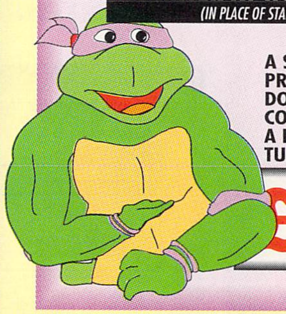
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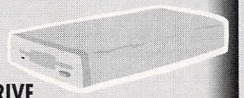


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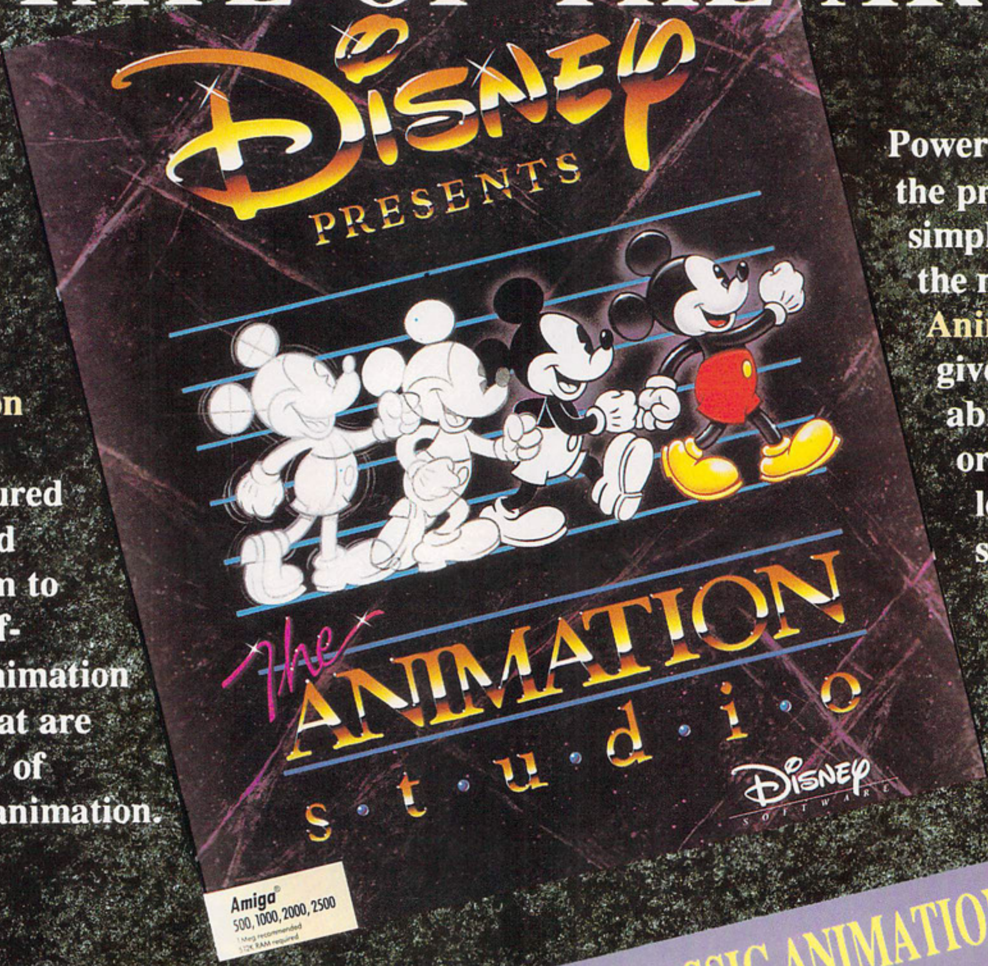
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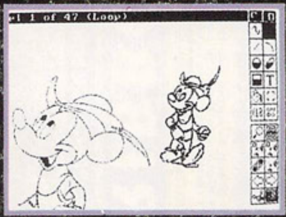
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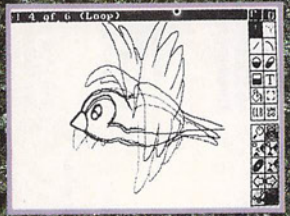
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COMING ATTRACTIONS



FLOOR 13

■ Virgin Games ■ Summer 1991

Floor 13 is where 'they' live. 'They' are a secret organisation who monitor and control the subversive elements within British society. They can tap calls, open mail, search houses, mug and murder to ensure that democracy remains intact. They must also remain totally secret to be effective.

In the game you will play the newly appointed controller of 'the' organisation. Fed with information from a variety of sources – informants, phone taps, confessions and newspapers – you must remain on the ball, frustrating plots to topple and corrupt. You will have to decide which leads to follow and who needs to be tailed. Due to limited resources only certain plots can be fully investigated and you will have to make snap judgments as to their degree of importance.

Floor 13 stresses the Conspiracy theory where unseen forces are plotting away and only you can see the real true path. The game will be played from a desk position so it will be a passive game that stresses observation rather than aggressive arcade-style participation. This controlling role looks to be one of its strong points though, because you pull the strings of power and watch the results. Fans of spy novels, company spooks, G-Men, Spectre agents, AIM operatives, Freemasons and Illuminati Primi should love it.

SHORT STUFF



Palace's distribution of Simarilis titles continues apace with the imminent release of another good looker from the French coders. *Metal Mutants* is the name and bashing monsters is your game. As a future war machine the *MM* is sent to a weird alien planet to hunt down and destroy a vicious tyrant. The hero is made more 'ard than you could imagine because he gets to pack, teeth, claws, missiles, axes, battle computers, whips, shields and a Swiss Army knife!

Arnie said "I'll be back" in *Predator*. Unfortunately the invisible predator who sported the smart dreds thought it sounded such a good idea that he's made a return in *Predator 2*. Based on the movie currently in production, Image Work's game is set in 1995 LA, where the pred' has followed a bunch of Colombian drug dealers to the city. The game will be a sideways-scrolling shootout set against the backdrop of a drugs war and is played in the *Op' Wolf* style. The finer points of this apocalyptic gun battle are being honed as we speak and should hit the screens at the same time as the film.

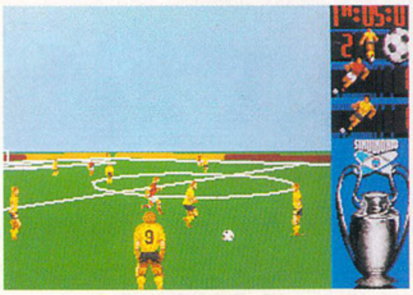
Another Mirrorsoft/Image Works film biggie is *Flight of the Intruder*. Designed by Spectrum Holbryte (the creators of *Falcon*) and coded in the UK it follows the adventures of pilots flying missions at the end of the Vietnam war. The Intruder of the title is an A6 Grumman as used during Desert Storm. Look out for the review next month, when *AF* takes a tour in 'Nam (again!).

Continued overleaf



Way back in the history of games there was *Gauntlet*, an overhead, run-around-a-lot kill-em-up. Then came *Gauntlet 2*, much the same only bigger, better and bolder. Now US Gold are working on completing the trilogy, taking the same manic gameplay elements, but viewing them from a new perspective. *Gauntlet 3* is seen from an isometric 3D angle and gives the treasure hunt a whole new lease of life.

Italy should have won the World Cup and to prove it Simulmondo, have designed a new look footie sim. *I Play 3D Soccer* is an on-the-pitch view game which allows you to play a specific position. The game is promising a post-game slow motion or fast forward facility, from the viewpoint of any player on the pitch. Let the offside arguments roll!



PREVIEWS UPDATE

The cat ate it! Aunt Mabel thought my disk was a coaster. We've all heard the excuses, but here's the games we've still yet to see.

MEGO-LO-MANIA Image Works – Expected Easter 1991.

ALCATRAZ Infogrames – Redesign has forced a release date of late April.

SHADOW DANCER US Gold – On track for late April.

F-15 II MicroProse – It will take off from a runway near you in April.

ROBOZONE Image Works - No release date yet announced.

SKULL AND CROSSBONES Domark – To set sail in late April.

FULL CONTACT Team 17 – Still needs tweaking!

NEVER ENDING STORY II Linel – Not finished yet.

COHORT Impressions – Release is imminent.



■ **Hewson** ■ **May 1991**

Pogo is back. The funny green hopping chap who was the hero of *Nebulus* won accolades by the skip load in his first incarnation – in fact the original was voted one of the top 15 Amiga games ever way back in *AF*19. Now comes number *2* and a whole new tower-climbing challenge, as Pogo works his way through a maze of vertical traps and puzzles.

The first *Nebulus* had a novel and challenging design, where the towers that Pogo climbed twisted and turned about our hero, who popped in and out of doors collecting stuff. *2* looks to take this strange logically illogical world a step further, emphasising the towers wrapping around nature to avoid the traps. If it can be half as good *Nebulus 2* it will be great.

ARACHNOPHOBIA

■ **Disney Software/Titus** ■ **May 1991**



Deep down in the South American jungle lurks a big, black, furry, venomous, spider. Thanks to some careless entomologists, the beast has now reached North America and is busy spreading Arachnophobia. Based on the cracking Steven Spielberg movie the game will have spider-haters reaching for their joystick.

The scenario casts you as an exterminator, who's bug spray is the only thing powerful enough to top the spiders. Luckily, you're trapped in the town they've taken over, if you can call that lucky. The mission is simple: poison the little blighters all the way back to Peru, to do this you will have to search houses, schools and barns inhabited by the spiders and rescue the frightened peeps inside. The movie was full of dark corner shocks and pastiche horror, lets hope the game can match up to it.

MEGAPHEONIX



■ **Dinamics** ■ **April**

Spanish arcade experts Dinamics are currently working on another high fire-power blast. *Megapheonix* follows in the flightpath of classic coin-ops, taking the *Galaxion* theme and bringing it right into the 90s. With a massive weapons quotient and simultaneous two-player feature it has the potential to be much more than just a blast from the past.

Dinamics have a thorough action-game pedigree, with the likes of *Navy Moves, AMC* and *Narco Police*. Their games traditionally feature large 'sprites', a high creature count and incredibly tough gameplay. Megapheonix should be no different, so prepare to give that joystick a pasting this Spring.



■ **Domark / Tengen**
■ **Spring 1991**

Hydra is a Tengen arcade that takes the familiar route of into the screen action. The twist is that you're driving an ultra-sophisticated hydrofoil. The game's set over nine stages and your aim is to break through a terrorist cordon to deliver governmental dispatches. Everything from jet-skis to zeppelins will be laid in your path, but should prove little trouble to any really-good Hydra pilots.

Domark have touched this field before with *Live and Let Die*, and so should have the experience to get this one running at a really ripping speed. To supplement the high-speed sailboat shooting will be digitised landscapes for backdrops. Domark's interpretation of Tengen licences have produced crackers in the past – *Vindicators* (*AF*1 81%), *Escape from the Planet of the Robot Monsters* (*AF*1 81%) and *Klax* (*AF*13 88%) – so hopes are high for Hydra.

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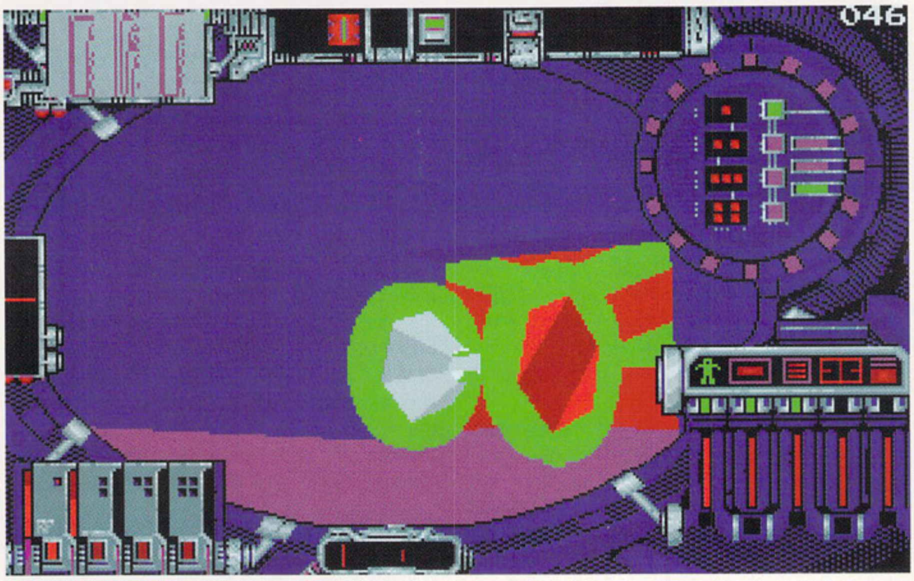
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CYBERCON III

US GOLD £24.99 ■ May 1991



So why all the hype about *Cybercon III* then? What's so special? Surely it's just another wander in 3D land? Well the hype, and the hope, for the game comes from the fact that it unites Ricardo Pinto – *Carrier Command* – and the Assembly Line – *Interphase*. This project, which has taken a year and all their shared polygon knowledge to put together, is now in the final polishing stage. As they add the last touches to gameplay, and the last loose logic ends are neatly tied up, it looks like they have something special on their hands.

Cybercon's world is a series of 3D polygon rooms which are viewed through the visor of an exoskeleton. 3D rooms are nothing new, some would even say nothing special, but here they have an extra quality. There's a real sense of scale and some truly immense rooms. Towers scream upwards, the trenches are perilously deep, and thanks to the special suit in which you play the game, you can switch levels with ease.

Size is important

Each flavour of Cybercon's defence robots have a specific purpose, look and range of abilities. All adhere, though, to the game's overall graphic style and exude meatily bad vibes. These re-emphasise the scale factor, as some guardians weigh in at 10 times your height. Furthermore, as the entire Cybercon complex is established in one load, rather than having individual rooms calculated as they are needed, the robots can all have a continuous purpose. Each breed is equipped with a set list of tasks and locations to visit, so the tin men go wandering with reason.

The game is structured so that while there is a logical, linear, order of play, there is also the chance for the curious player to explore for the hell of it. The world exists and will react to your increasing success regardless of the path you choose.

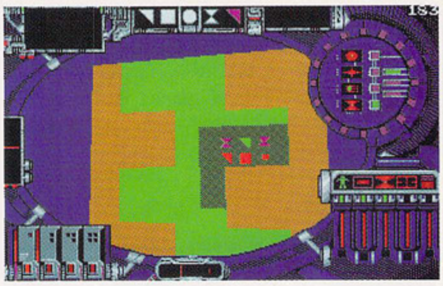
3D games in the past have either been sims or interactive puzzle games (á la *Driller*). Sims give the flexibility of both movement and purpose, but they rely on the technology and sensation simulated to inspire. Freescape allowed you to handle puzzle elements in an adventure style. *Dungeon Master* and *Captive* both alluded to 3D and called upon a wider range of gaming skills, but they didn't allow the flexibility of a polygon world.

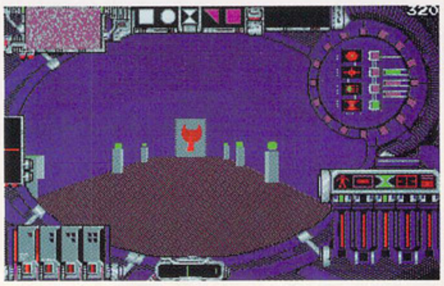
Arcade 3D

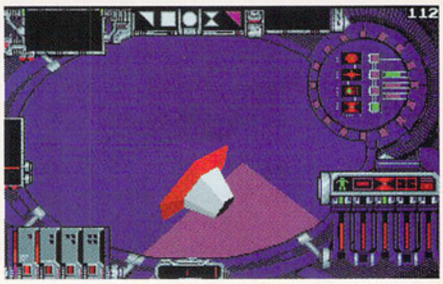
Cybercon has all the combat scares of *Dungeon Master*, but also the puzzle and precision stepping factors found in Freescape. *Cybercon* fuses together these elements and also adds arcade-style sections.

The most stunning of these, so far revealed, consists of four platforms that hang over a huge chasm. Using the suits jump power you must leap from one to the other – while being shot at! A 2D sprite concept applied to a 3D world. The core code for the game has now been written and the Assembly Line have an ST version running. The game now needs to be ported to an Amiga and have the suitable enhancements fitted. However, the need to check such a large 3D system, robot logic, and trap solutions means that the game itself won't be mastered on the Amiga until the end of April.

Be sure, that the first review of the full Amiga version will be here in *Format*. Be ready, be brave, *Cybercon* is coming.







WHO IS CYBERCON III?



Cybercon is watching. Cybercon is listening. Cybercon wants to kill you! In fact, he wants to exterminate all mankind. Cybercon 'himself' was designed as a defence computer, with total control over a superpower's arsenal. Everything was fine – and the machine was upgraded twice, hence *Cybercon III* – until the Big C suddenly bombed out, and took civilisation with him. Now the mad machine is using drone robots to hunt down all remaining humans. As a survivor it is your duty to break into Cybercon's bunker lair and make a ghost of the machine.

The bunker base where Cybercon resides is bombproof and theoretically assault proof. A flaw was built in – by paranoid generals – and players start the game at a secret entrance that's on the periphery of the base, armed with a nuclear-powered exoskeleton. The technology of the exo-suit and the robots that are defending the base are of an equivalent level, so with luck you'll be able to find extras to spruce up your kit, that may just make the mission feasible.

F-15 II

Publisher – MICROPROSE
Release – May 1991



There are few military techno' superstars. MicroProse have covered them all: Apache gunship's, nuclear submarines, Stealth Fighters, F-15s and Abrams M1 tanks. MicroProse have built their name on these games, giving players a high level of simulated accuracy and well-rounded games to boot. But what do you do when all the technology has been covered? Well, MicroProse have an answer; they will do them



again, even better, on the formats they never reached before. Currently on the way are *Stealth Fighter II*, *Gunship 2000* and the first off the duplicators press will be *F-15 II*.

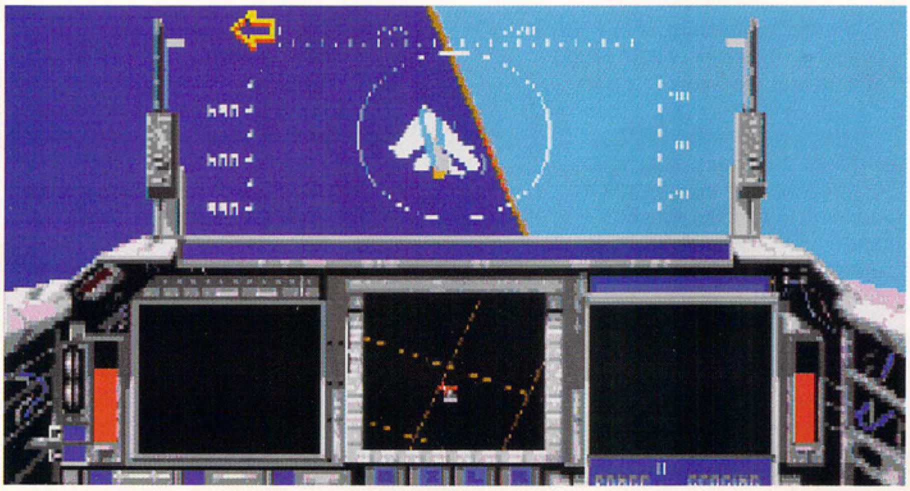
F-15 was a strong fighter-bomber sim, that stressed action but only ever saw service on PCs. MicroProse realised that there was a gap in their Amiga airforce, namely for the F-15. They had mastered the sea, land, and helicopter support and even Stealth Bomber preparation, but had no fast-strike aircraft. The *F-15* game re-think emphasised high-speed aerobatics more heavily than *F-19*, which was more of a strategy-sim hybrid. Now using many lessons learned from working on *F-19*, MicroProse believe they have the skills and the aircraft for the job; *F-15 II Strike Eagle*.

F-15 II has been specifically written for your Amiga. The game itself was designed by MicroProse Labs in the States, with its target being the PC. When the code arrived in the UK, the British MicroProse developers took the central concepts and rewrote the entire game in machine code, rather than in the PC's C. The result is that the 'slower' Amigas and STs now have real afterburner potential. When the game was demonstrated to the Format team the game still needed tweaking, but it is obvious that the 3D engine, which hauls the world and plane around, is capable of mapping and displaying horrendous amounts of information at a hitherto unthinkable speed.

Quick draw

The speed of any 3D system is effected by the number of objects currently being calculated and shifted around the environment created. Then you need a fast drawing routine to display all the objects currently in view. So, obviously, the frame rate can be totally messed up if the objects that have to be drawn are highly complex. A complex object can be considered anything in excess of 30 different polygons. Before the new drawing system had been implemented, when flying low over the aircraft-carrier (an amalgamation of over 100 polygons) the frame display rate stayed well over eight frames a second. The 3D system MicroProse UK have managed to create is continually being updated and modified.

Even the F-15 itself has been completely redrawn while the game is being written. The original worked for test purposes but didn't look sharp enough from an out-of-the-cockpit view. Now it has been constructed again out of even more polygons to look as F-15-like as is polygonable possible.



The refinements in 3D routines means that F-15 has an even larger area to fly around than Stealth Fighter, and to beef-up the game aspect two new battlefields have been built. As well as the PC originals of Libya, the Persian Gulf, Vietnam and the Middle East there are now Central Europe and Northern Cape to choose



from. If they are anywhere near as tough as the Stealth Fighter zones then you will need to be as quick on the ejector as you are on the cannon.

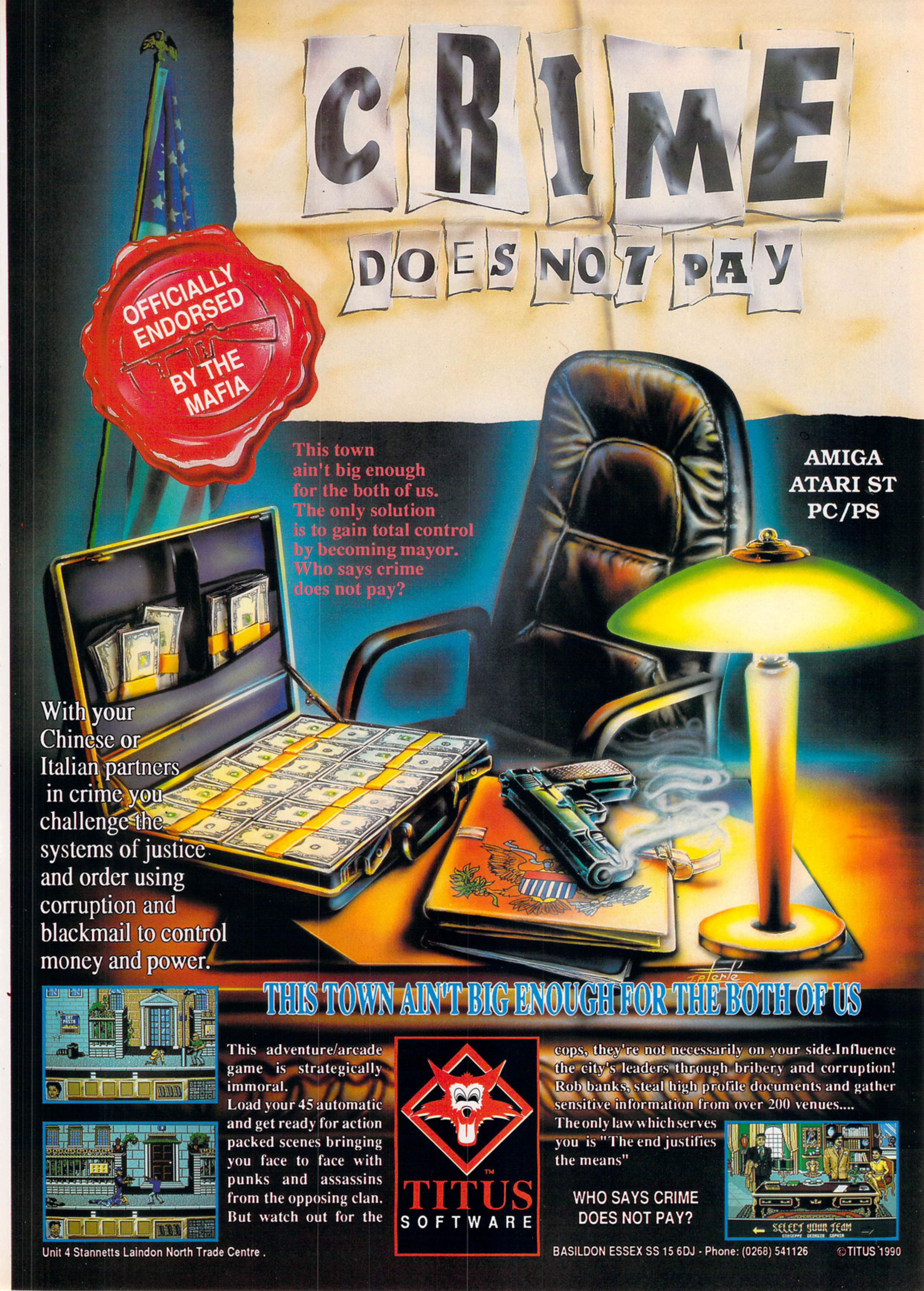
Sweet 15

The entire graphics for the front and end-of-game screens have been completely redrawn to make the most of the Amiga's still graphics potential. What's more they've added Falconesque, side and rear-view shots where the pilot is no longer simply looking out of the window but clocks half of the cockpit into the bargain. They are also planning an animation of the pilot being ejected out of the plane (with his parachute). Touches like this add to the realism and solidity of the overall package.

The talk of frame rates and number of polygons means nothing, though, if the game has no spirit – if there isn't anything which begs you to play it. *F-15* has speed by the throttle-load and that will be one of its major pulling powers, but it is the air duels that will be where it either turns or burns. That test will come at the review stage, when the bird is put through its paces, but the first test-flights look, as they say in the football world, well good.

TECHNICALLY SPEAKING

Original game design – MicroProse.
Amiga and ST coding – Adrian Scotney and Tim Walters.
Graphic Artist – Mark Scott.
Their most recent project was *F-19 Stealth Fighter*.


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SCREEN PLAY



FULL STEAM AHEAD!

MicroProse's Railroad Tycoon: Flying Scotsman or Hornby OO?
Get a ticket on P.50

With Amiga games becoming ever more diverse and complex, the *Amiga Format* reviews system is designed to be flexible enough to accommodate all styles and genres. We give one overall score, which reflects how good each game really is. This score is accompanied by a short list of the game's good and bad points, highlighting those elements that make it stand out from the crowd and those parts which really annoy. These points are then fully expanded and explained in the main review.

Format will, whenever possible, only review completely finished software. This means we see the version that ends up on the shop shelves, the version you buy. Waiting for finished games does occasionally mean that reviews of some Amiga products appear in other magazines before *Format*. Our review, though, will be an authoritative statement of what a game *is* like, not speculation as to what it *may* be like.

The reviews team is headed by Trenton Webb and Maff Evans. Trenton had a long history in the world of 8-bit games reviewing on *Amstrad Action* before moving up into the big league for *AF* 14. Maff Evans joined the team on *AF* 7, after a heroic tour of duty with *ZZap 64*. They are backed up by a highly-experienced team of specialist reviewers from Future Publishing's crop of market-leading computer titles.

PGA TOUR GOLF

The golf war starts on P.68

ARMOUR-GEDDON

Psygnosis get six of the best on P.58

THE KILLING CLOUD

Attack of the killer smog P.74



We've got a few coins in the coffers and that town on the left looks like it's dying to be a part of your network. If we join the track just outside Magdeburg we could even take in that sheep farm.



Zoom in and you can start laying the tracks. Notice how all your money's disappeared now. Time to sit back and wait a while until the wallet swells again.

RAILROAD

MICROPROSE ■ £29.99 Mouse and keyboard

Trains eh? Love them or hate them, you just can't ignore them. Not only are they jolly useful things for getting about on but, as every school kid knows, they've got these really groovy numbers on the side that you can write down in a small dog-eared book and collect – exciting or what eh?

Fortunately, most of us grow out of this and discover girls or motorbikes, but Sid Meier didn't. He went on to produce a game about the 'Golden Age' of railroads. Incidentally, the 'Golden Age' was so called because hulks of metal moving slowly and billowing huge clouds of steam and smoke have more 'character' than hulks of metal moving slowly billowing clouds of diesel exhaust.

The train game

The game is single-player and based on building and operating your very own railroad. There are four different game maps to play on: Eastern and Western USA, England and Europe. These alter the basic structure of the game.

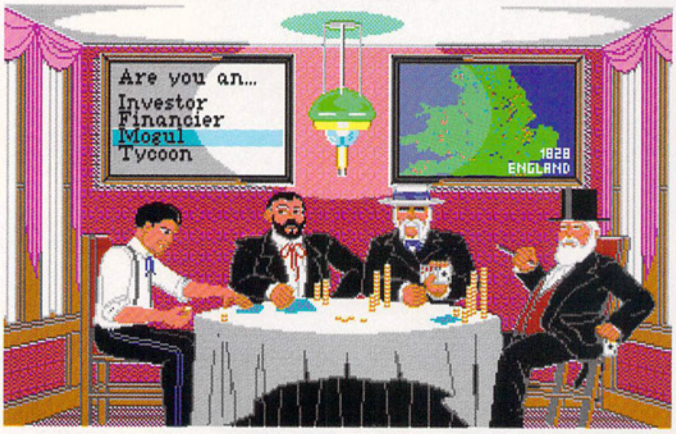
The different regions have their own peculiar economies. They also start in different years, for example, so there is a vast difference in the technology that is \available to the player.

If you plump for the European scenario the game is mostly menu driven and the player spends the majority of his time studying the map of his particular region. Cities are represented as coal mines, factories and a range of other industrial complexes.

At the start of the game you're given a whole bunch of money to get your railroad off the ground. You decide where you want to build the station, you decide the exact route the tracks take to the next town or whatever and then you decide the exact make-up of the train, that is, what carriages it pulls and where it's going to stop.

Right, so we've spent a whole lot of money building a couple of stations and getting a train running between the two of them. What next? Make some money! Every station runs on a supply-and-demand basis. When you build a station you're told what it can offer and what it wants – novices are advised to go for the easy option, 'basic economy' which means although the station can only supply certain things it will pay for anything you manage to get to it. In the complex-economy scenario (this can be

Start out as an investor and things will go pretty easy for you. Once you get onto Mogul and Tycoon level though things are far from easy. How come all your competition seem to have aces up their sleeves?

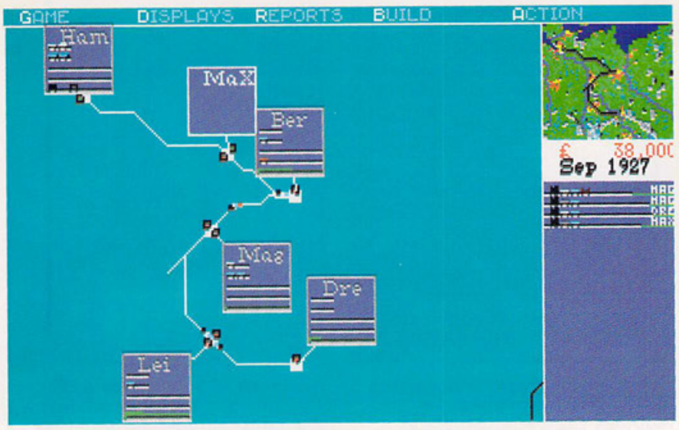


Oh no, disaster! You've finished the track but your bridge has been washed away and a different train is about to go plunging into the river – that's not going to please your public too much.



The different stations cost more to build if they have a larger catchment area. In this case the station is better than the terminal as it's more cost effective.



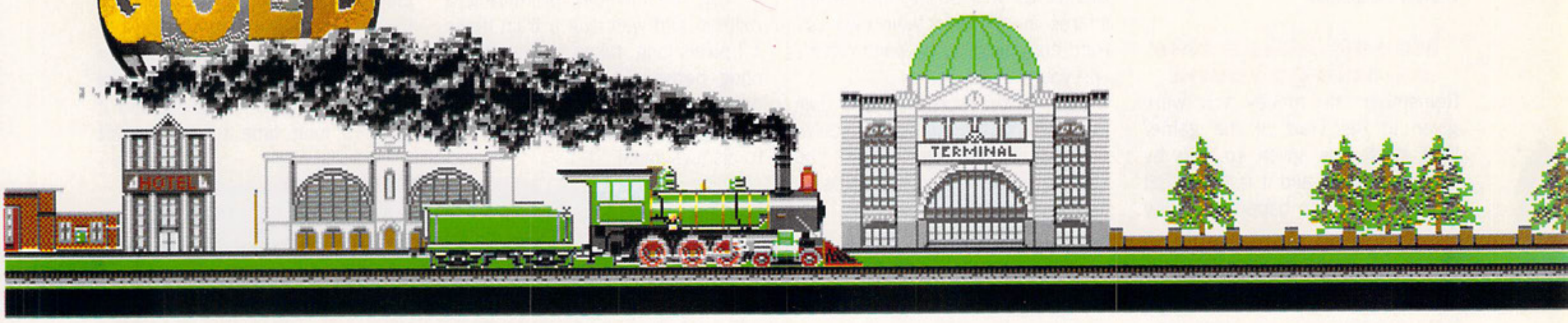


Your whole network. Each station has a shipping report where you can see what's waiting at what station. Hamburg looks like it needs servicing a bit more often than it is at present.

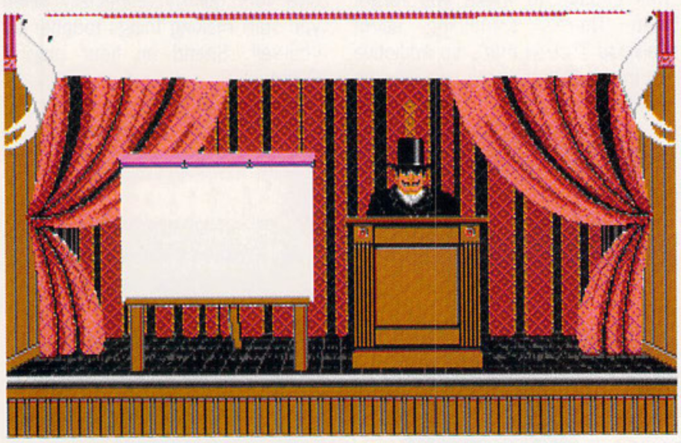


Right, a couple of years have passed and you've got some more money – extend the track past the sheep farm (put a depot there when the line's finished) and into the heart of the city.

AMIGA GOLD TYCOON



Enter a rate war with one of your competition and after a couple fo years the town council will decide who's provided them with the best service and insist the loser moves away – immediately.



And after just a few short years the first train arrives at your newly connected city. The citizens celebrate, you celebrate and the bank will start to celebrate too!

turned off or on at any stage in the game) you will not get paid for any shipments you deliver to a station that doesn't want them. This means you really have to think hard about your routing of trains and their carriage make-up.

So if you are shipping stuff between the two stations and the people are paying for it. Time to expand to a new town? Why not. Build some more track, add a new station and get another train running. Now you've got the added problem of deciding just what stops the train should make. Should it run from station A to B and back? Or should it go from A to C to B to A. Your choice is based upon the station's shipping reports – how much of a certain commodity it can supply each year and how often you can get a train to the station in the year – you may only get a train to a station once a year!

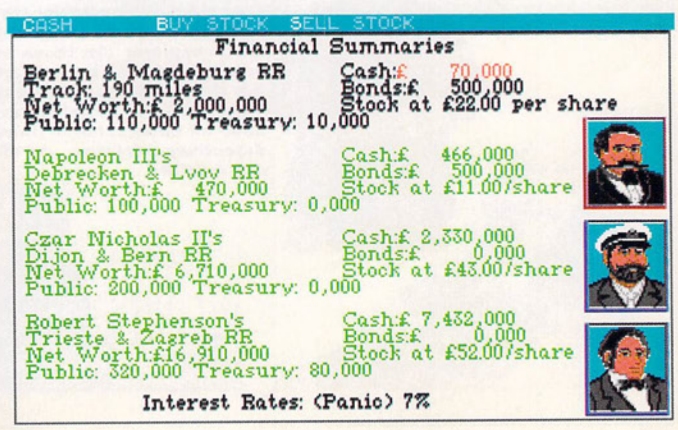
The game runs on a very weird timescale. Your two towns may only be a few miles apart and the trains may be very slow, but even so they can take months of game time to get from one station to the next. Obviously this is completely unrealistic, but it's the game's means of progressing.

The game's other main ingredient is dealing with your assets. As your trains chug between their sta-

Continued overleaf ▶

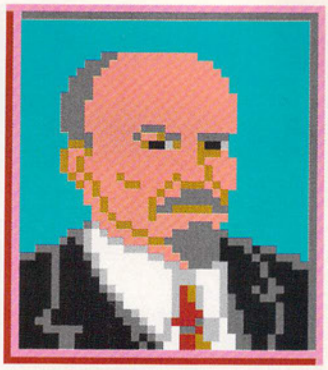


Here's where you can wheel and deal on the stock exchange. Buy your competition's shares when they're low and sell 'em again when they're high for a nice tidy profit.





In *RT* you get to go head-to-head with some of history's greatest railway builders. This is Benito Mussolini, famed for making the trains run on time. He pops up all over the place outwitting Il Duce is really worth the effort.



VI Lenin, Russia's railway architect. He realised that railways were essential for industrial growth and set about linking all the major industries. Curiously he can appear in America for a curious, anachronistic challenge.



Helmuth von Moltke is a builder, historically his aim was to mobilise the German army in preparation for the First World War. Wherever he appears he remains a slow, steady builder, who tries to dominate the game.



Napoleon III both builds and stockpiles, a fact that reflects the schizophrenic nature of his Empire. He is easily beaten and therefore is one of the best opponents to draw of the 22 randomly selected bunch of other tycoons.

tions a calendar clicks merrily along. Every other January the game reaches the end of the fiscal year and it's time to do some money business.

Money makes the wheels go round

Remember the money you were given at the start of the game? Well, that was given to you by some investors and it is them that you have to keep happy. How? By doing well and expanding your empire which pushes up the price of your shares.

By this time other railroads would have been started up by the computer – up to three of them – and they're also trying to do as well as they can. There's an option in the game for 'cut-throat' competition. Basically this means the other railroad bosses will be wheeling and dealing on the stock market as well buying and selling shares in not only their own railroad company, but in each other's and yours!

It's a practice that you can take part in too and once you've got to grips with how it works you can win as well as lose a whole lot of money.

Expand and conquer

The basis of the game is to use whatever means you can to get money and use that money to improve your railroad. As the years click by the technology gets better and you can build bigger, better, faster trains – or if the investors get upset you could find yourself out on your ear and someone else at the helm.

OK, so the idea of running a railroad and watching a train that's 10 pixels long, takes six months to chug between two stations won't appeal to anyone who likes whiz-bang graphics, but you'd be a fool to dismiss it just on the dull graphics.





It's a strategy game, but dressed up well enough, and one that plays well enough to make you forget that. There's something about *Railroad Tycoon* that's so addictive it's impossible to leave once you've started. Perhaps it's the difficulty tuning and the multitude of options the player is given to make his life as easy or as complicated as possible? Perhaps it's the fact that the game rewards smart thinking and plays few dirty tricks – you only do badly because you deserve to.

Railroad Tycoon is very similar to *Sim City* in a lot of ways, the graphics may not be great and it takes a long time to really start enjoying the gameplay. Once you do you will find it becomes obsessive very quickly, especially when you start making things tougher on yourself. Spend an hour playing *Railroad Tycoon* and you may as well cancel all appointments for the next few weeks. ***Andrew Smith***

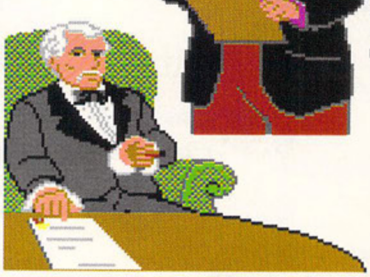
I wanna be a slug!

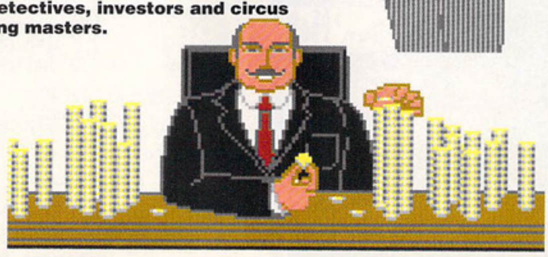


The obvious aim of *Railroad Tycoon* is to rake in as much cash as possible, as quickly as possible, for as long as possible. However, like all good empire builders you should be aiming to use your cash to buy a place in the loftier social circles. Why anyone would want to join the Henry James set is beyond the imagination, but the amount of dosh you make does affect the post you will be offered upon retiring – the game – from the sordid world of business. The ultimate accolade is to be hailed as Prime Minister (or President). Other more achievable posts on offer include Hobo (dead easy), arctic explorer (for those with credit problems), portrait artist (for the disaffected businessman). Then of course there's always a need for butlers, horse trainers, detectives, investors and circus ring masters.









VERDICT

- Obsessive gameplay that is nice and easy to work with.
- A multitude of options to switch on or off as you get to grips with the game
- One of those rare games that lets you make your own mistakes – and forces you to live with them.
- Not an engine number in sight!





Take to the skies in this all-action arcade game for 1 or 2 players ...

White Sharks is packed with features, including simultaneous 2 player gameplay, near-photographic graphics, hi-fi quality music and effects, and a completely unique weapon customising screen that allows the player up to 37 million different weapon combinations!!!

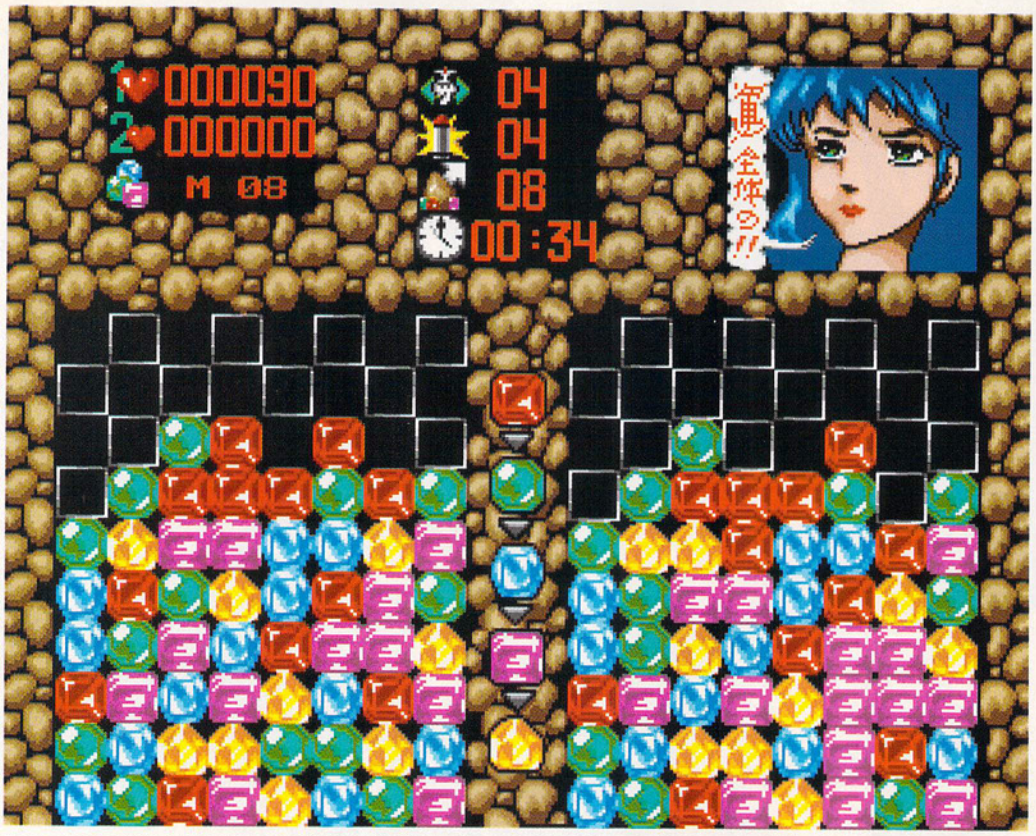
To succeed, each level and alien will require different tactics, while the fast-paced action will keep the trigger finger on overtime. Take the challenge in this shoot-em-up with a difference!!

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This pretty cluttered screen on round M will need some careful planning to complete. Click on the correct gems, to change the colours on the left, to match the pattern on the right. But look at that moves counter – only four left! This is certainly not going to be an easy task!

GEM-X

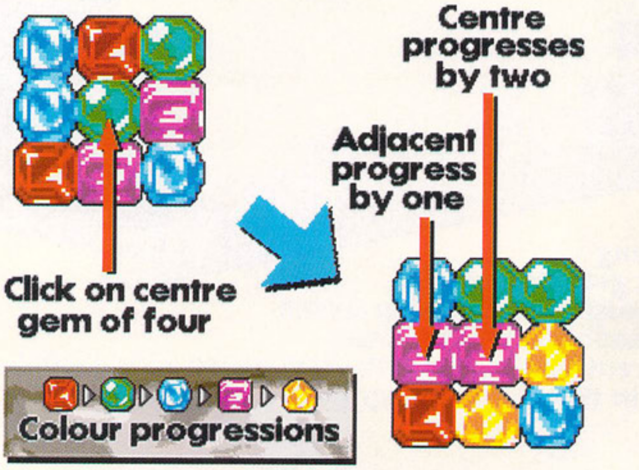


DEMONWARE

■ £24.99 Joystick or mouse

Many puzzle games rely on a cutesy atmosphere to attract players and if anyone knows about how to produce cute things it's the Japanese. Japanese consumer culture is based heavily on 'cute', from pop stars to kids toys, if it doesn't look cuddly then you've had it! *Gem-X* is very oriental in its style, this is due to the fact that the game is full of bright colours and jolly, tinkly music and guess what? Cute girls with big eyes.

CHAIN REACTIONS



The key to beating *Gem-X* is learning the order and patterns that the colours change. You have to get used to working in groups of gems in order to affect the right gems in the right order.

Turning Japanese

The game is introduced by a particularly pretty female, Kiki, who leads you through your quest. The game itself is simple. The screen is split into two halves, stacked with coloured gems. You must move the hovering hand around the left-hand screen, clicking on gems to change their colours, the order of which are shown on a diagram down the centre of the screen. You must click the right gems to match the pattern shown on the right.

If this sounds too easy, the gems don't change quite that simply. The gem clicked on jumps two down the chain, while those adjacent to it drop one down the chain. If any gem goes past yellow, then it's removed from the screen.

You must complete a number of screens on each level in a set number of moves, or you will not be allowed to progress further. At the end of each level you will be given a password and the option of choosing the next stage from a progressive 'tree'.

Girl with the faraway eyes

The most striking thing when loading *Gem-X* is the cute Japanese feel the game has. From the amusing little samples that tell you how well you're doing to the slightly risque inter-level cartoon pictures, the game just oozes an oriental flavour. In a time when puzzle games seem to star either hi-tech imagery or unimaginative blob-like creatures, the superb comic-book style employed in *Gem-X* comes as a welcome change.

The game is incredibly compulsive. The going starts easily enough to allow you to get the feel of the colour protocols, but once you get halfway along the 'tree' the going gets tough very quickly. A game that had a similar approach to *Gem-X's* level construction was *Puzznic*. But *Gem-X* boosts its lastability by selecting the screens you play at random, so even if you play it for hours you still stand a good chance of coming up against an unexpected level.



This variety coupled with the marvellous presentation and sheer addictiveness make *Gem-X* one of the most compelling puzzle games to have appeared for some time. ***Maff Evans***

VERDICT

- **Wonderful oriental style cartoon graphics and sound.**
- **A huge number of puzzles manage to present a new challenge time after time.**
- **Incredibly addictive gameplay keeps you hooked for hours.**
- **A simple puzzle idea which manages to boggle the mind a surprising amount!**

88%

TURN THIS PAGE

TO ENTER YOUR

NEW WORLD. . . . .


3D CONSTRUCTION KIT™
PIERRE TAYLOR (28) – PORTSMOUTH.
I own a car company, but my real love has always been the idea of space travel. I've often played around with art packages but what I really wanted to do was to design a spacecraft once, then bring it to life and walk around it. This incredible package allows someone like me, who knows very little about computers, to do it easily!
First I put together a couple of blocks to make the fuselage.
Next I added the cockpit and the nose.
Adding detail was easy. I only needed to design one wing, then used the copy, flip and rotate feature to produce the other one.
PAUL BUCHANAN (22) – EALING – TRANSPORT ECONOMIST.
I've always wanted to design my own house, but I could never really visualise what it would look like once it was built. What would it look like from above? Or from the side? Or what if I wanted to walk through the front door and arrange the furniture? With this marvellous software package, I can do all the things and make my dream house come true.
To start with I put up three simple walls.
Then I made a roof and lowered it down.
I added windows, a picket fence and the first tree in my garden. But the interesting bit was yet to come...
CHRIS HALL (15) – STUDENT – YORKSHIRE.
I loved Castle Master and wanted to make a similar game myself. I had plenty of ideas but no way of bringing them to life. After all I'm not a programmer.
Using a couple of the many 3D objects included in the pack, I quickly designed my own game landscape.
I wanted to give the game a particular style. This was easily done by using the excellent colouring and shading facilities.
Then I set up some of the conditions which could make the game truly interactive.
incentive
The Award Winners
Available on
Amiga, Atari ST, IBM PC 3.5" & 5.25", Commodore 64 (cassette, disk) Amstrad (cassette, disk) Spectrum +3, Spectrum 48/148.
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Coming soon: The Incentive Story – 4 award winning Incentive 3D games in one pack!

It's a simple, effective way to design a detailed environment (house, garden, village, ship, car etc. etc.) and then look around it to make sure you like the look of it from every angle.

There are environments through environments. For instance, the house has rooms, the rooms have furniture, a chest of drawers has compartments, the compartments have secret boxes, the boxes have .... etc. etc.

It's up to you. The limit is your imagination. Use it for school – or to show Mum how to re-arrange the living room. Dad might be interested in how the garden would look if it were laid out differently – with a new pool? And how would the neighbours see it from their angle? It's easy! Just spin it round!

This is probably one of the most expensive pieces of software you'll buy this year – but *at last* you can make your computer really show it's potential.

"There's no doubt about it, this could be the most impressive game creation utility ever released.

Not only does it allow you to create run-time modules complete with animation, shoot-em-up compatibility, puzzle solving, and maze exploration – but it enables you to do it in solid 3D, using a system that's even better than Freescape!"

ACE – FEB'91

"3D Construction Kit gives newcomers and non-programmers the power to create solid 3D objects that can be stretched, rotated, suspended, stacked and even given animation effects. Yet the whole system is so user-friendly that it makes most simple art packages look cumbersome."

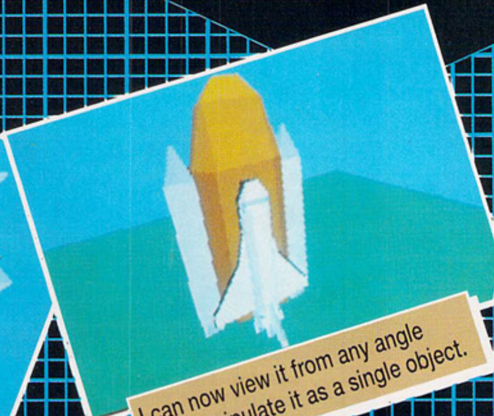
ST FORMAT – FEB '91

"Build your own virtual reality, but don't be misled. This is **not** a boffins only product. I've produced a special video included in the pack which shows you how to do it – and helps get you off to a flying start. After that it's simple and in no time you'll be impressing everyone with 'magical' designs on your computer!"

IAN ANDREW, INCENTIVE



I added the fuel tank and boosters.



I can now view it from any angle and manipulate it as a single object.



This is a head on view, showing the control panel which enabled me to do it. Not bad eh? Pretty good for a beginner.



Walking in through the front door, I could see what the rooms would look like.



And using the simple control panel, I could design the furniture and move it around.



Home, sweet home!

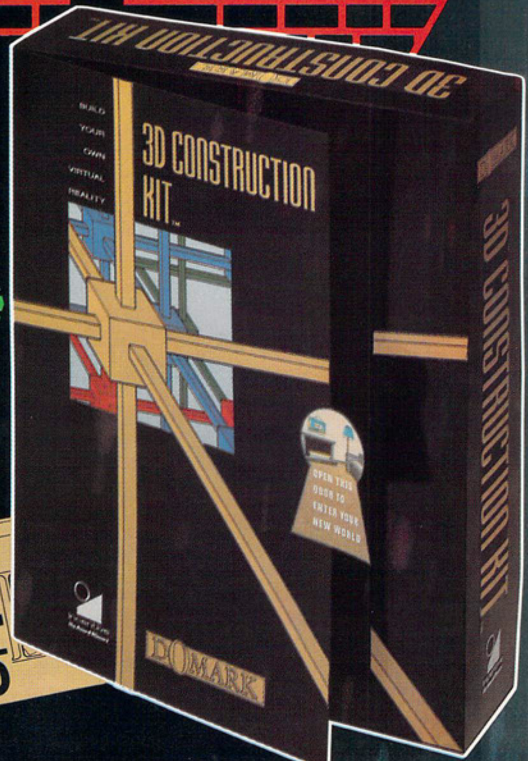


Using the simple pull down menus and on screen prompts designing a great game was a doddle – I could even have strength and time bars!



Finally, I dropped in a control panel from several included (although I could have made up my own).

I've sent the finished game to my cousin in Wales. He hasn't got 3D Construction Kit yet ... I reckon it won't be long before he gets a copy.

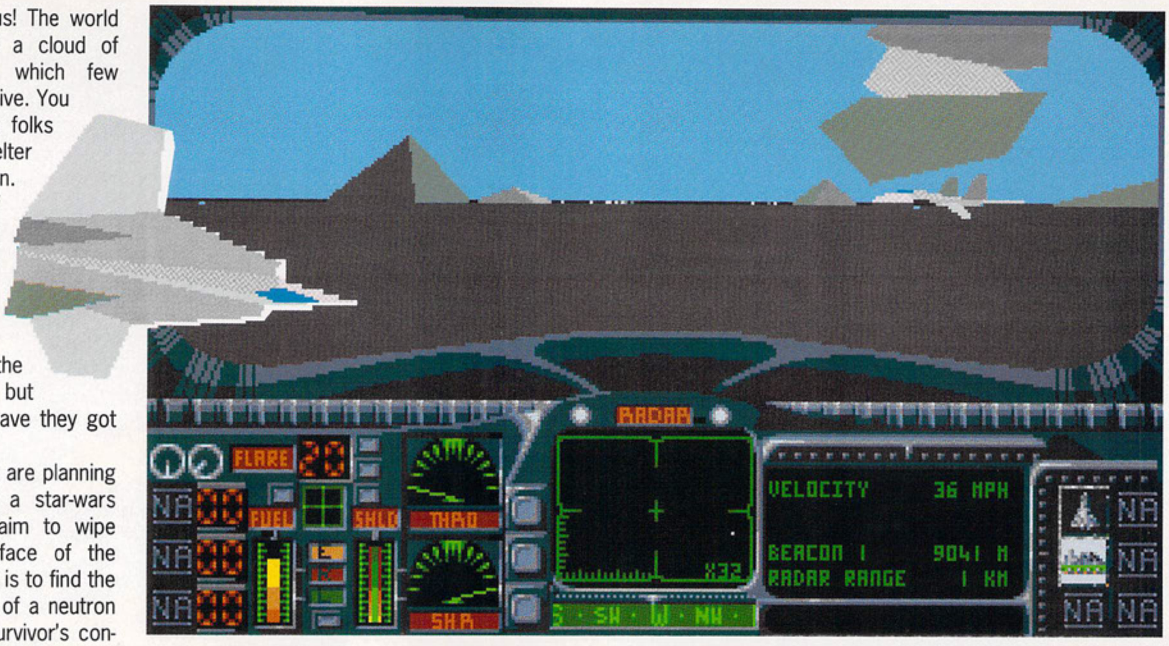


DOMARK

INCLUDES FREE TUTORIAL VIDEO

It's doomsday plus! The world has gone up in a cloud of nuclear smoke, which few have managed to survive. You are one of the lucky folks who found some shelter when 'it' hit the fan. However, as part of the military, you share partial responsibility for starting the whole shooting-game in the first place. The bulk of the populace perished, but some survived, and have they got an axe to grind.

Now the survivors are planning their revenge. Using a star-wars satellite beam they aim to wipe your base off the face of the planet. Your only hope is to find the five component parts of a neutron bomb and total the survivor's control centre, before they total you.



The hovercraft goes for a quick run to try and find what happened to the plane. Unfortunately the remains of the stealth fighter can be seen smoking on the floor. The hovercraft is hard to drive, and even harder to stop, but it is the one land-based vehicle that's fast and can cope with water. It is vulnerable, so take care.

ARMOUR

PSYGNOSIS ■ £24.99

Six of the best

Your team, employing six different vehicles, must sally forth from the safety of the bunker base and fight their way to the bomb components. In their way stand the survivors, who possess the same kit as them. Using fire-power, tactics and guts you must recover all five bomb sections, then hit the ground station. FIve bomb sections have to be recovered and you and your team have to, using all the fire-power, tactics and guts you can muster, achieve this and then hit the ground station. To slow the enemy down you can blast their power lines, which stalls their production lines, while yours still churn out the necessary vehicles for each mission.

At your beck and call are a heavy tank, light tank, hovercraft, helicopter, stealth fighter and bomber. The full range isn't available to begin with, scientists and engineers have to be set to work researching and building the vehicles you need. Each craft has strengths which must be used to support the others in the recovery race. Bombers and fighters, for example, can prepare targets, leaving the field clear for the tanks.

Every vehicle can be controlled individually, but more effective commanders will use the waypoint facility. This method lets the computer guide a craft to the target while you prepare another arm of the assault force. This process results in some slick screen swapping as you try to control up to six different craft simultaneously.

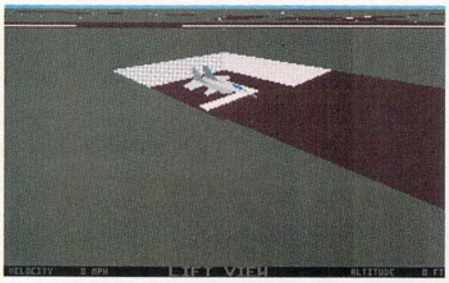


The strategy screen shows the entire game area, your vehicles and attacking craft. It's best to suppress the foes around the base first so you can actually get your vehicles above ground with their shields charged up before they feel the heat, especially for the weaker craft.

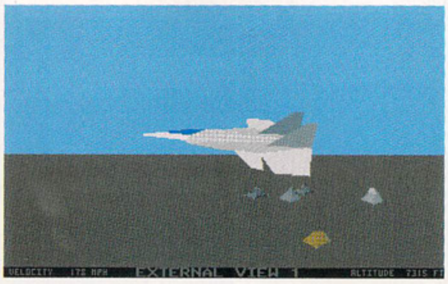
Operating from the bunker you are quite safe because a vehicle is only vulnerable to attack when it is topside. To help crews survive each vehicle has a deflective shield, and cloaking devices can be built to provide ultimate protection. These babies rapidly drink fuel and must be used sparingly if your boys want to make it back home. Tanks are the heaviest gas guzzlers but prove to be the hardest vehicle available, while hovercraft are economic but easily killed.

Nightdrivin'

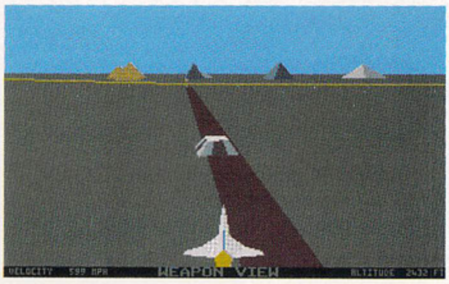
To cut down on fuel consumption the bomber can drop telepods which can transport your vehicles around the 80km square battle zone. Nightsights can be developed to allow 24-hour battling, this is an essential aid, because you must finish the bomb before the satellite turns Psygnosis' polygon playground into plasma.



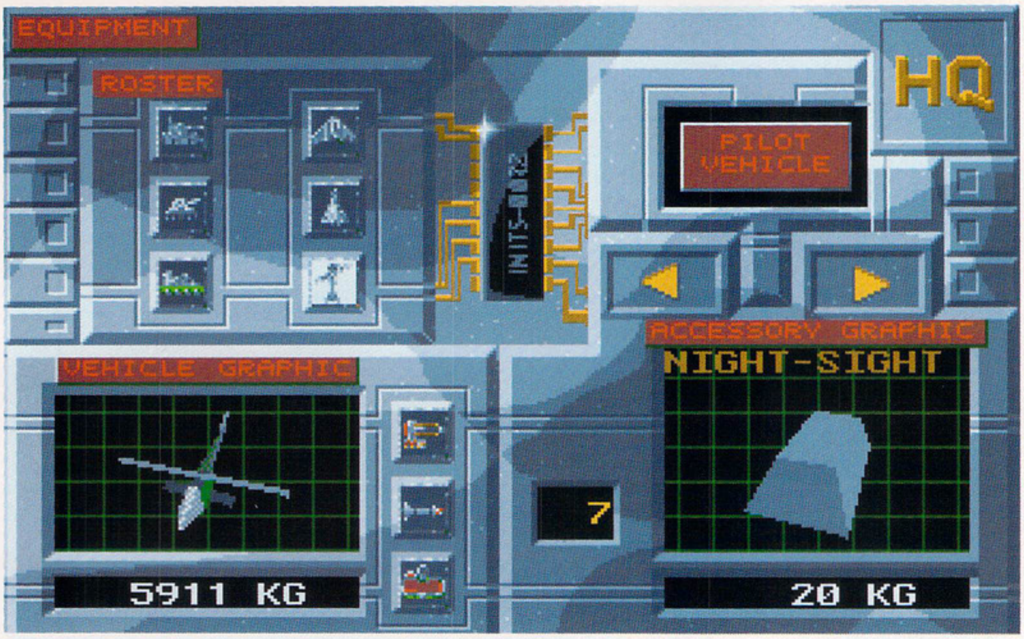
The stealth fighters brought into play. Raised on the lift, ready to attack the first enemy base. Get it armed, shielded and airborne.



Flying through the air with the greatest of ease and only a few handling quirks, the stealth softens up the target for the tanks.



A missile goes for the kill. While you watch the target die, the plane will circle its waypoint, if you remembered to set one that is.



At the arms dealers, you get to tool up each vehicle before it is sent out on a mission. Nightsights are vital for longer forays, but so to are weapons pods and spare fuel. You've only three pods to fill, so make sure you choose the supplies to match the task in hand so don't just load up on the best weapons.

GEDDON

Joystick, mouse and keyboard

The craft, and the world in which they explore, is composed of high-standard 3D polygons. Everything moves smoothly and at a reasonable lick. Perspective dots help the airborne craft to judge distance, while shifts of perspective are handled with a smooth cinematic pan.

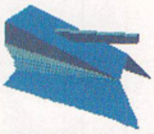
Battlezone

The six vehicles share similar control layouts which makes swapping craft easy, but controlling them is a different bag altogether. The tanks don't like stopping quickly and the hovercraft slides crazily. The helicopter is simple to get airborne but a swine to land, while the bomber barely manages to take off. The fighter is the only problem craft, exhibiting strange quirks, particularly when pulling high G moves. As a bundle though, they provide the necessary tools, once you've learnt to control them!

BOMB THE BASE



Heavy Tank – hard, slow and drinks fuel. Can collect neutron bomb parts from wrecked bases.



Light Tank – Quick, quite tough and good on gas. Can also collect neutron bomb parts.



Hovercraft – fast, hard to drive but excellent on fuel. Never use during a full attack.



Stealth Bomber – slow and dull, it is used for re-supply. It's needed to drop the neutron bomb.



Stealth Fighter – the main attack plane, can match anything the enemy throws at you.



Helicopter - fast, easy to fly, hard to land. Carries good weapons range and is reasonably tough.

Fusion

Armour-Geddon manages to fuse a range of game styles. It has a management side where you have to ensure the scientists develop the correct weapons and that the engineers have enough supplies (which are liberated from destroyed enemy bases) to build them. It employs a low-level strategy hook,



forcing you to judge the best balance of craft and payloads to knock out certain installations. On top of this it offers six different vehicle sims.

The vast array of keyboard controls do make *Armour-Geddon* a bit of a slow starter. However, these are quickly mastered and their scope does allow for maximum gaming flexibility. There are still problems though, which really frustrate you the first time around. The intelligence screen for example, which is used to select waypoints, doesn't display co-ordinates.

N-Bomb

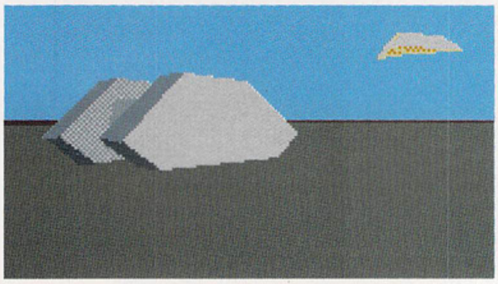
Armour-Geddon is a well-structured six-mission multi-sim blast. The game has to be studied thoroughly if the vehicles abilities are to be fully exploited as both the sims and the foes are unforgiving. The player who can build and drop the neutron bomb will have to be perfect; good just won't cut it. *Armour-Geddon* though, lacks the initial focus needed to pull players through this very necessary learning curve naturally. These skills alone however, once mastered, allow you to discover a tough, mixed genre, game.

Trenton Webb

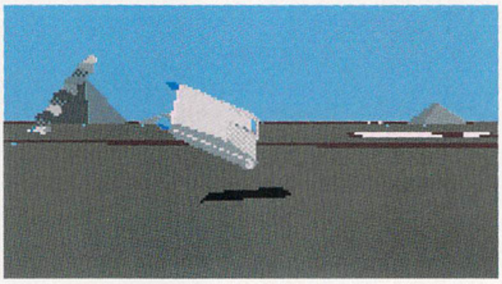
VERDICT

- **Six different vehicles to drive, fly and crash.**
- **Highly detailed controls allows for real flexibility.**
- **The vast amount of vehicles and controls are initially frustrating.**
- **Once the control system is mastered the game comes alive.**
- **Six missions, each requiring guts, guns and good planning.**

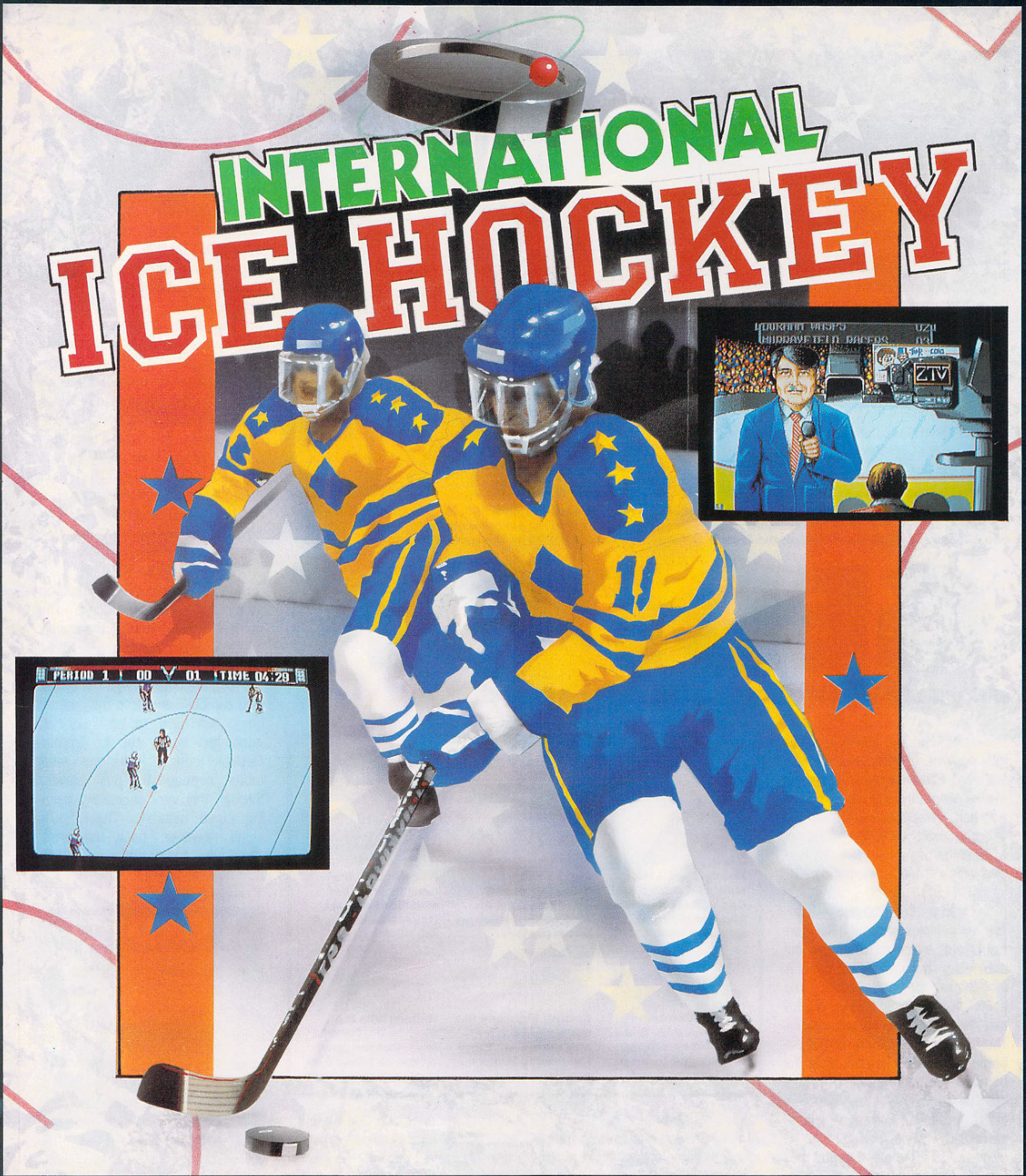
85%



The heavy tank rolls under the teleport module. Drive under, switch-off the engine and teleport to another module placed by the bomber earlier.



Oops, the hovercraft takes a tumble and is now officially dead. Never mind though, the technicians will only take a few hours to knock up another.

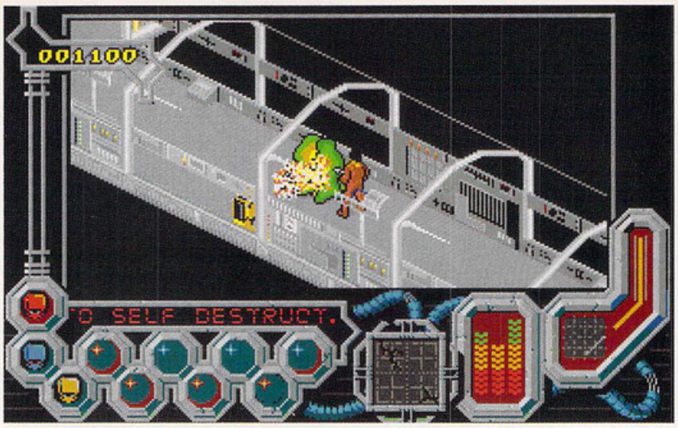


INTERNATIONAL ICE HOCKEY brings the competitive and aggressive world of Ice Hockey alive on your 16-Bit machine. The extremely fast rink action, combined with an array of top class features, makes this the most definitive Ice Hockey game of all time. Get involved in all the exciting thrills & spills. Play the fastest team game on Earth. *Features include:* Television Commentator match coverage, action replays on the best goals in each period, unique "snapshot" option where the best plays can be saved to disk, variable team play strategies, player confrontations with "sin bin", on-screen referee with authentic knowledge of Ice Hockey rules, alterable player control methods, full three division league, friendly games, league loading and saving capabilities, one or two player options, and lots, lots, more !!

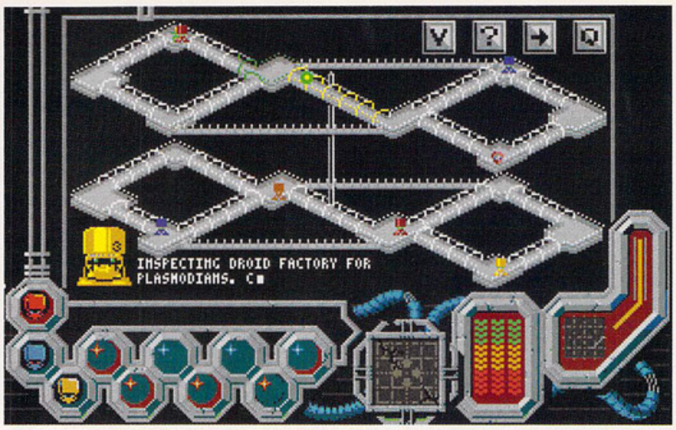
Available:-

Commodore Amiga	£24.99
Atari ST	£24.99

IMPULZE



The jelly-like aliens attack. This one has taken the body of a crew member and is invulnerable until all the aliens in that wave have been killed. The laser canon you have will keep him at bay, so shoot or run.



The robots can be sent on a mission using the map screen. Click on the relevant icon (its face) and then the desired location. Then the robot scoots off and helps to fight the wreckers. Team work is vital.

WRECKERS

AUDIOGENIC ■ £24.99 Joystick, mouse, keyboard

Ever have trouble with your Plasmoids? You know, those nasty green squishy lumps? The ones that will eventually grow large enough to cover your entire body in a jello-like emerald slime.

The Plasmoids in question are, of course, the alien blend of slime creature from outer space. They eat space lighthouses, which is a bitch, because that's where you are! Awakened from cryogenic slumber, the warning system says that a swarm of Plasmoids are on their way. You have to shuffle about the place, getting ready for the attack, building and programming robots who will help you keep the station in one piece.

To the lighthouse

First the plasmoids lodge on the outside of the plexiglass space lighthouse and then ooze through. As soon as they touch, a self-destruct sequence is initiated and the only way to stop this 'sterilisation' is to kill them all. Using the twelve robots and your own laser blaster they have to be fought off, either outside in space, or hand-to-hand inside using a trusty blaster.

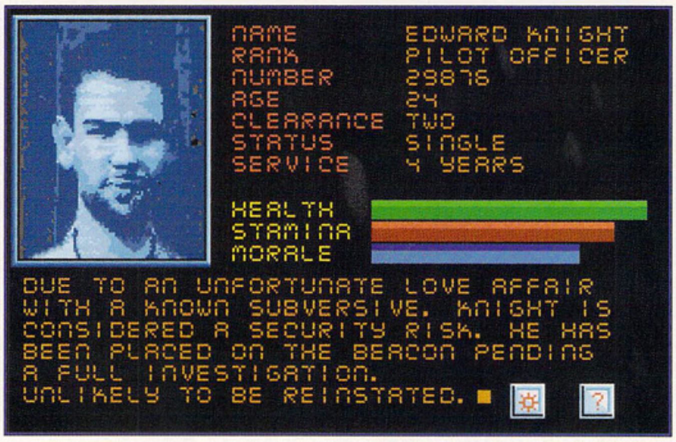
As all hell breaks loose battle wise, you also have to make sure that the four beacons stay balanced (or they explode in a nuclear fashion), that the right droids are manufactured and that the current ones are fixed after a fight. Shooting with one hand and managing the space station with the other proves to be a hectic exercise as wave after wave of jelly monsters attack.

Wreckage

Wreckers has that *Jetsons* touch, with silly bubble craft, daft spacesuits and wobbly beasties. The graphics give this damage limitation scenario a comic bite. Reminiscent of *Robot Monsters* it plays better simply because there is far more to do.

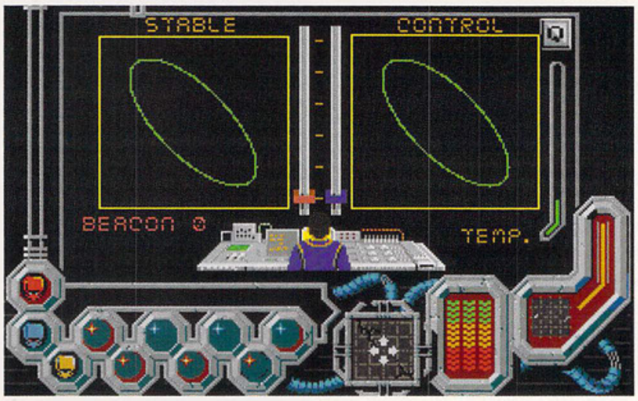
The use of three different characters, each with different strengths and weaknesses gives the three life motif creditability, and means that early in the game vital strategic decisions have to be made. The strategy though, is that of the panic and the fun comes in the crazy chase about the space base hunting that last elusive Plasmoid, while the station desperately tries to go supernova!

Wreckers is a novel twist in the 3D isometric game world. The playing area is limited, but the variety of tasks and the pace adds originality. *Wreckers* is a hoot in the short term, but may lag in the long term, as once you've seen two waves of Plasmoids you've seen them all. They'll still raise the pulse a little though, and that's when the Wreckers are in full effect. An original arcade-style game, *Wreckers* will confound and confuse, panic and please, which is all they really need. ***Trenton Webb.***



You just can't get the staff! These are the reprobates you must work with to save the station and your neck. Each one has peculiar talents which must be used if you are to fend of the slime creatures.

BALANCE OF POWER

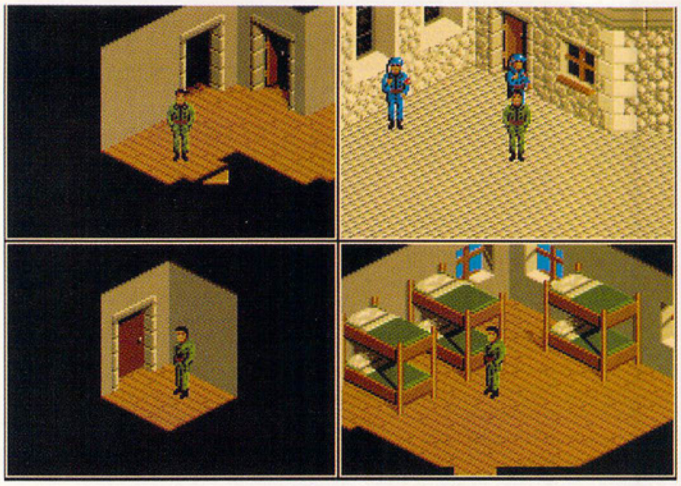


The space beacons are powered by some particularly dodgy fuel cells. As the wreckers attack, the cells become unbalanced and if left to their own devices, the devices will explode. So as well as dashing about generally being a hero, you have to make sure that the cells stay balanced. The wave analysers should look like identical. If this ain't the case then you have to use the sliders in the centre to throw them back into synchronisation. This little technical juggling act comes at just the wrong time every time and adds a manic maintenance edge to the battle.

VERDICT

- ***Jetsons*** **style cartoon graphics work a treat.**
- **An arcade style presentation with a foundation in crisis management.**
- **Isometric 3D works well in conjunction with icon order section.**
- **The fun is instant, but may not last.**
- **Easily controlled, but hard to beat.**

82%



Hit f5 and you will see the position of all four of your men. One's in the cooler, one is safe in his dorm, one is mingling obtrusively in the courtyard and one is stealing quietly down a Verboten passage.



Für Sie, Tommy, ist das Krieg zu Ende! Our plucky chap was trying to smuggle a howitzer into his dormitory when the Germans smelt a rat. A guard ambles off after blasting the offending inmate. The body remains throughout the game, as a reminder to those foolish enough to attempt escapes of their own (heh heh).

ESCAPE FROM Colditz

DIGITAL MAGIC SOFTWARE

■ **£19.99 Joystick**

A more Wagnerian scene you couldn't imagine. A massive Schloß perched on a high rocky outcrop in deepest Germany. Strong, big and 600 years old, Castle Colditz was being used as a secure lunatic asylum until the outbreak of the Second World War. The German Army designated it Oflag IVC, and used it for housing those stubborn Allied POWs who were most determined to regain their freedom.

Escape From Colditz has been available as a successful board-game for years, but this Amiga version takes the concept much, much further. You switch control between four characters, an Englishman, an American, a Pole and a Frenchman. They start off in their dormitories and must explore the castle using the lock-picks and fake keys which they must collect from different rooms.

Itz cold in solitary

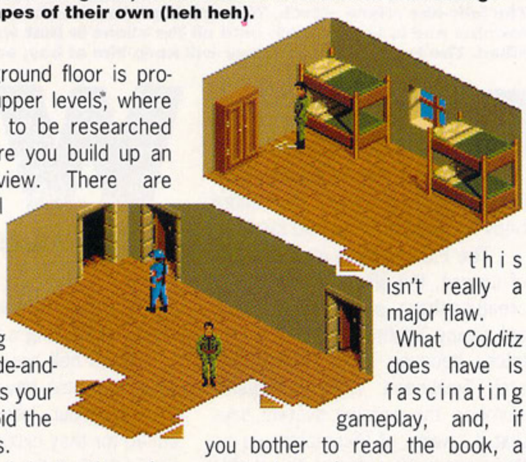
As in the board-game, there are vital items of escape equipment secreted in obscure places (the chapel and canteen are good locations to search), and the objective is to accumulate Ausweis passes, lookalike uniforms, rope and other gear for your men. Once they have enough (or so you think), they can make a bid for freedom. This might be through one of the tunnels, under the wire or even by bluffing their way through the main gates!

LEAVING THE ESCAPE-PROOF CASTLE

Escape From Colditz comes complete with a large tome written by Major Pat Reid. He was one of the 30-odd POWs who actually got out. Most went via Switzerland, often posing as Flemish-speaking Belgians to avoid using their somewhat abysmal German.

The escapes were often unbelievable, through 100s of feet of tunnels, often etched along the castle's stone walls. Others got out by hiding in vehicles servicing the garrison.

During the last months of the camp, the Allies had partitioned off a large portion of an attic and were constructing a two man, completely airworthy glider. The Germans never knew of its existence and it was never officially removed after the Americans liberated the castle. As Major Reid speculates in his book, it's probably still there to this day.



A map of the ground floor is provided, but the upper levels, where you start, need to be researched thoroughly before you build up an accurate overview. There are mazes of small rooms and corridors, most out of bounds for the POWs, so an exciting element of hide-and-seek emerges as your men try and avoid the patrolling guards.

The supplied instructions for the game are minimal, which is actually in keeping with the exploratory feel as your men roam round the forbidden areas of the castle planning their escapes. You soon pick it up, and can concentrate on plotting your moves.

Capture in an out-of-bounds zone means a solitary spell in the cooler and the confiscation of that man's equipment. This is annoying, but infinitely preferable to the hail of Schmeisser fire you will receive if spotted in a really forbidden area. So caution and prudency are sensible watchwords.

There is a castle far away

Colditz is an absorbing and skillful game. The challenge is great, because the castle was reputedly escape-proof, and rightly so. Every time you play you will learn and explore more, so it manages to hold its initial interest. Computer-controlled events like Appel roll-calls, exercise trips to the yard and random guard searches make the game more fun, if even harder. Racing along the corridors ahead of the guards exercises your joystick fingers in time-honoured Amiga fashion, too.

The 3D graphics are perfectly serviceable and there is enough detail to keep you playing, and to remind you roughly where you are in the forbidding castle. In particularly-detailed rooms the graphics do slow down considerably, but this isn't really a major flaw.

What *Colditz* does have is fascinating gameplay, and, if you bother to read the book, a great deal of historical interest. Once completed you won't want to do it again in a hurry, but that completion might take some time. The difficulty of the task looms large, but if you're the sort to be easily daunted by guards, walls and barbed wire you certainly wouldn't have "graduated" to incarceration in Colditz Oflag IVC in the first place. ***James Leach***

VERDICT

- Difficult to complete, but full of little details. Would appeal to the adventuresome and to those trying to overcome claustrophobia.
- Slick and presentable. You wrestle with the strategies not vagaries of the program.
- Slightly specialised, and tedious to those expecting a World War II Rambo-style kind of blast-em-up.

79%



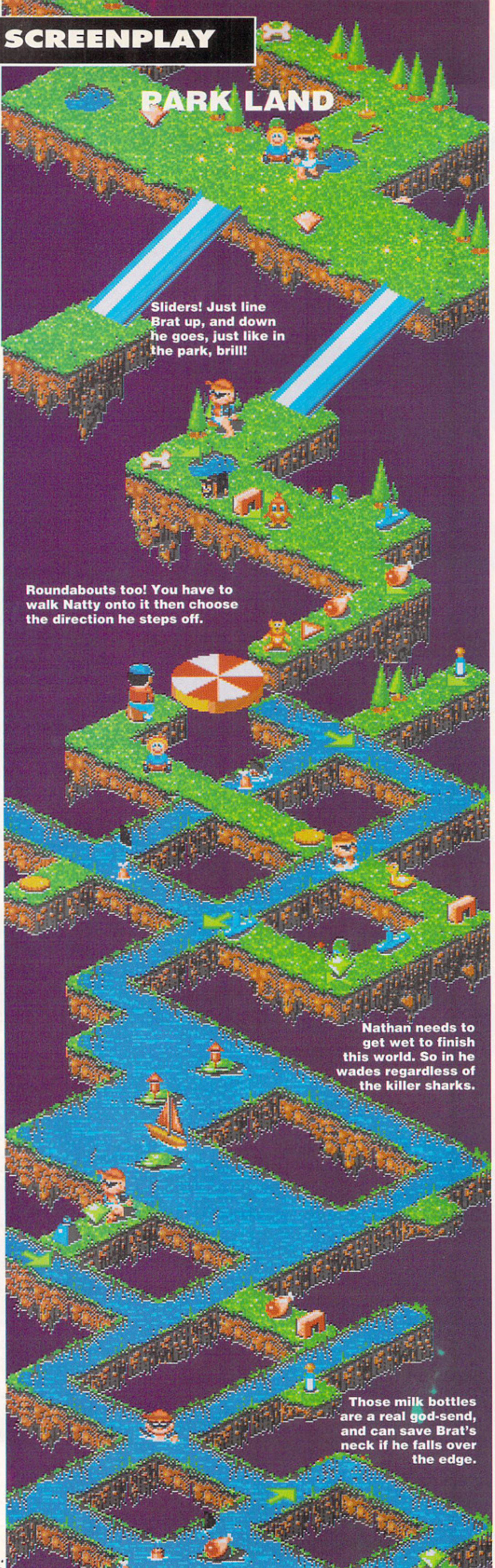
Are you ready to take on Kiki and her friends in this unique game of strategy and skill?

Match up the 2 patterns of stones on the screen - special combinations give bonuses and secret levels. Succeed within the time limit and gorgeous girls will lead you to the next tantalising level.

If Kiki isn't temptation enough, then 400 levels of stunning graphics, sound and speech, and gameplay so addictive that you will have to be dragged screaming from the screen, surely is.

Available on Amiga (24-99), Atari ST (24-99), PC (24-99), and C64 (10-99 cass., 14-99) disk).

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Nathan has an attitude problem. It's not so much a problem during the day, but at night we are talking serious trouble. During the daylight hours he's a little darling, the kind that Grannies stand over for hours, cooing and going gaga. At night however, he gets wrapped up in dream world, where his toys have been scattered in a landscape where a wrong step could stop him reaching the grand-old age of two.

Brat is cute in an anti-cute sort of way. Once away from mummsy, around are Nat's toys. Most are harmless and the little 'un wants to get them back. Some, however, take on a mischievous life of their own in Dreamland and want revenge on Natty for the ill treatment of the day. Toy cars will try to run him down, Jack-in-the-boxes spring surprises scaring Nat' back to reality and toy sharks try to munch him in the water sections.

Problem child

The problem lies in the fact that Nathan has dreamed a scrolling world. He starts at the top while



BR

IMAGE WORKS ■

he becomes a cool, struttin', dude around town; leather jacket, shades and all. And as they say 'when your mum's away the brats will play'. This wouldn't be a problem if you didn't know him, but you've been given the task of minding Nat' for the evening.

You are the one who is personally responsible for his well being and making sure he doesn't awake from his dreams screaming, whooping and a hollerin'.

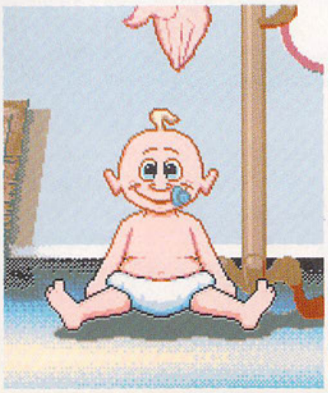
Parental guidance

While the nipper kips you have to guide him through his dream – is this the first Freudian therapy game? Each dream world is a hovering landscape with a void of nothingness on either side. Falling off it would certainly wake the nipper in just the wrong way. Lying all the screen rolls up from the bottom, which means if Nathan doesn't get his nappy in gear he will be eclipsed and wake up. Nathan struts down the isometric 3D landscape at precisely the same speed as the screen scrolls. If he continues to walk straight on, though, he will fall off the edge and into a waking state, unless you can guide him down the screen.

You, as the sub-conscious baby-sitter, must intervene and lay a trail that even a one-year-old could follow. Guiding him along a safe route to the bottom of the screen, and collecting as many toys as possible.

Getting this lovable (pahh!) kid across each world couldn't be easier in theory. You've a bevy of directional arrows (well nine actually) which have to be picked from

Nathan is as good as gold when his mum's about. Little does she know that when she's out of the room he becomes the Brat.



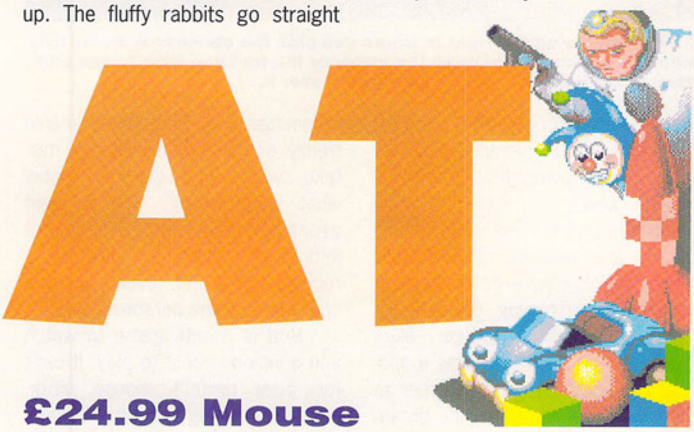
Natty shows his true colours and totals a toy mouse. Note that anvil, it comes in dead handy when Nat' visits Dreamland.



the icon selection section and laid on the landscape. These arrows have to lead on from each other. Otherwise he just walks ahead oblivious to any danger. As well as the directional arrows, you've a stop command and a stop scrolling icon, which when Brat walks onto them – everything must be laid down so he steps over them – gives you a chance to get your directional head together.

Some of Brat's toys, 11 in fact, can also be carried if Brat walks over them and picks them up. The fluffy rabbits go straight

is kept moving he will remain in the centre of the screen, if you divert him to collect a toy or avoid certain doom, then he begins to lag behind and the top edge threatens. The game itself is a trail-laying test, but you must judge in advance where the trail will lead. Limited to manipulating what is on screen, means continually flicking between the icon bar and map, sticking arrows here, bridges there and dynamite everywhere. The mouse pointer with which everything is laid, quite cutely is a dummy!



£24.99 Mouse

back to the real world, but the more useful ones such as dynamite (some toy!) can be stored in his jacket pocket for later use. You can't pick anything up, remember this is Nathan's dream, but you can slap them back on the map to destroy or nullify a Brat-waking trap. These include lead weights which can suppress sprung toys, explosives which blow a path clear for the nipper and bridge blocks.

Quite why Nathan decided to dream a world which doesn't totally connect is one for the shrinks, but you have to continually lay building blocks to bridge gulfs in the landscape so that the Brat won't fall.

Dummy!

The pace of the game stems from the ever scrolling screen which matches Brat's walking pace. If he

Another problem, though, is Nathan is destined to be a banker in later life as laying the trail costs you cash! Honestly, you're trying to help the kid get a nights sleep and he wants to make you pay!

Arrows are cheap but bridges cost an arm and a leg, so you have to be economic with the trail. To regenerate capital Natty has dreamt gems and coins into the landscape, but they are always in the most inaccessible places. This forces you to divert Brat to collect the baubles, as well as the toys. The mouse goes into overdrive as you try to link as many objects as possible on this treasure trail.

To make matters worse one dream leads to another, and the deeper sleep that Natty gets into, the wilder the game becomes. The

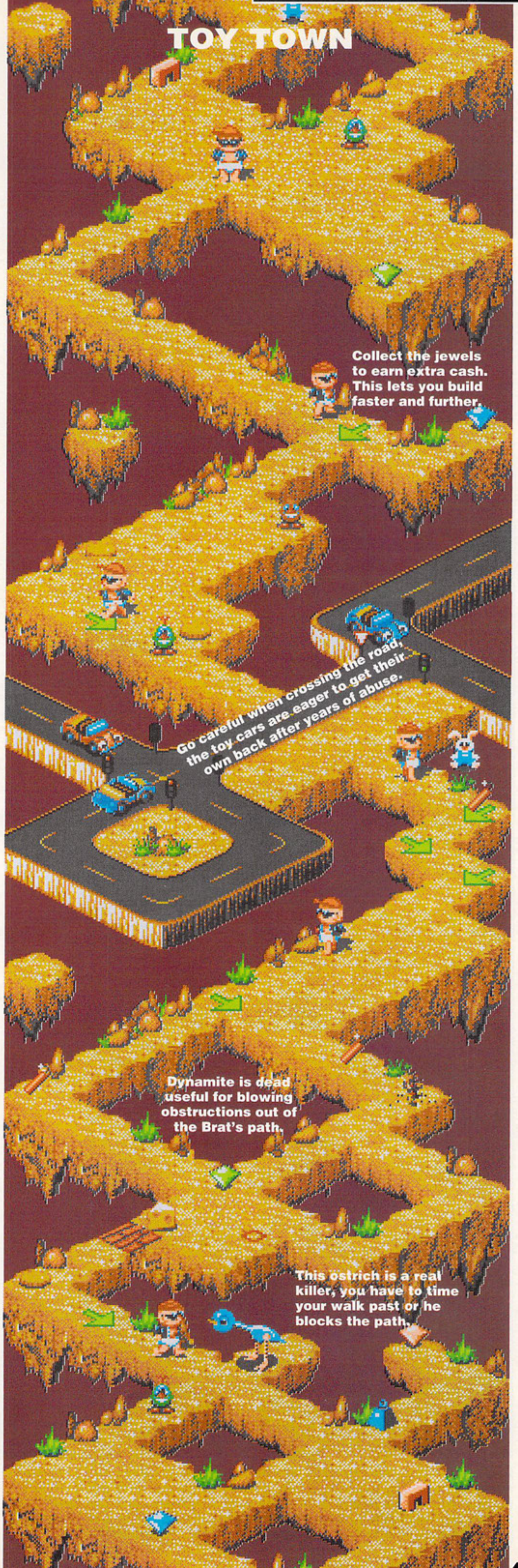
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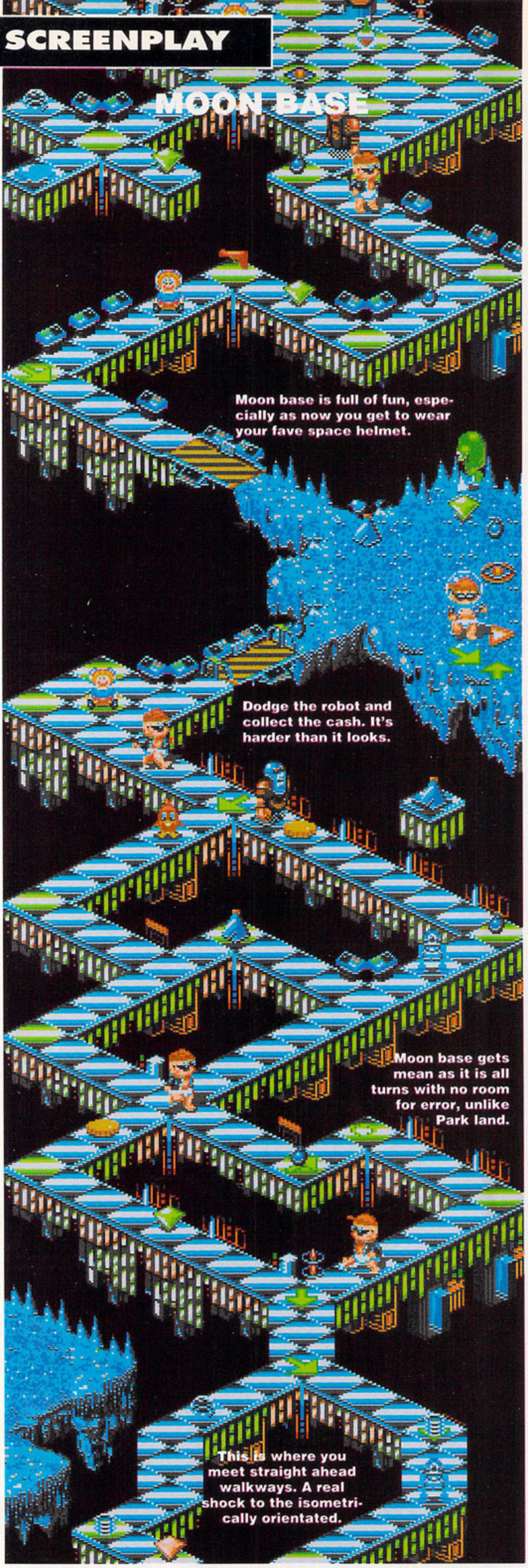
Yo homeboy! Nathan begins the transformation into Brat. First comes the jacket then the baseball cap and Ray ban shades.



Do you feel lucky punk? All tooled up with somewhere to go! Brat is now ready to hit the dream scene and get his toys back.



MOON BASE



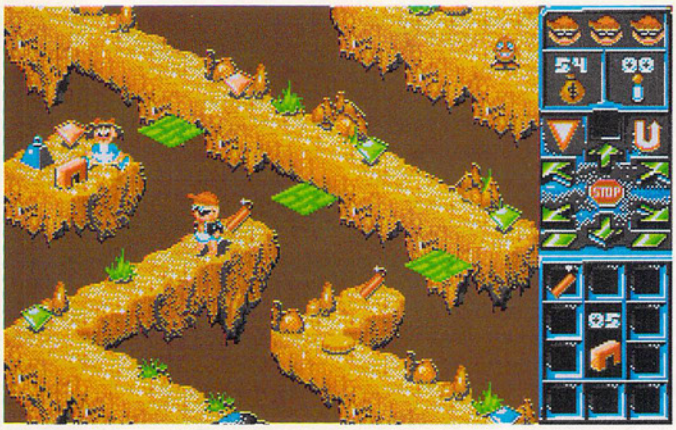
Moon base is full of fun, especially as now you get to wear your fave space helmet.

Dodge the robot and collect the cash. It's harder than it looks.

Moon base gets mean as it is all turns with no room for error, unlike Park land.

This is where you meet straight ahead walkways. A real shock to the isometrically orientated.

Brat goes cyber but the rules remain the same. In many ways the thin corridors help you guide Brat, as there is no guess-work involved in placing the next arrow, just fool the path and then click the arrow where you want him to turn. Park Land is larger but there are no nice lines to judge Brat's path, mistakes are, alas, fatal on both.



The menu bar on the right is where you pick the commands from. Just click the 'dummy' cursor on the arrow or the tool you wish to use and then place it on the map so Nat' walks over it.

landscapes become more sparse, the toys more plentiful and the cash levels lower. It's a logistical puzzle where you have to know what comes next and what special items are needed. This means repeated playing, a good memory and then performing perfectly 'in game'. Luckily Nathan likes secrets, and each level has a special name, which if you whisper to him will make him begin the dream at a later level.

That's life

The idea of a baby being the hero of a game may sound lame after the arcade heroes and star-cruiser brigade. The theme therefore demands ultra-tight graphics to convey the brightly coloured world of a nipper to the screen, and Foursfield – the coding team behind the game – handle it well. The Brat is small and perfectly dumpy, a good pastiche of his older kin in a baseball cap and a leather. The landscapes are solid and all the toys are immediately recognisable. Don't believe the hype about the anti-cute nature of the nipper, because the whole concept smacks brilliantly of twee, kindergarten designs and logic. Besides what's anti-cute about a strong-willed baby making life hell? That ain't fantasy, that's life.

Brat's cot is firmly supported by excellent opening titles and seriously silly sound effects. An animated scene shows Nathan throwing off the diapers of the day, crushing a toy and becoming Brat. A failure to make the next level ushers in another sequence. The problem child falls to the floor from a dream platform, rudely awakes and leaves you in no doubt as to whose fault it all really is.

Brat, is in many respects akin to *Lemmings*. The major difference is that here you have only one person in your charge and not a herd. It's a different style of challenge though, because you have to guide him in three dimensions not the *Lemmings* two! That same manic frenzy of cursing follows any mistake, where you generally know what went wrong, why it went wrong and blame the game for not letting you avert it. This spurs repeated play as levels become challenges of the personal kind.

Brat is a cute game to watch and a vicious beast to play. It calls for pixel perfect mouse work, inventive thinking around problems and excellent timing. Colourful graphics supplement the game, adding character but they never overpower the core concept. It's a puzzle game in a cutie's clothing, and as so works better than the usual collection of blocks. Guiding the nipper away from doom ain't easy and won't appeal to everyone, but those who take the Brat on board are guaranteed sleepless nights, full of attempts to get the kid snoozing. Just like the real thing. ***Trenton Webb***

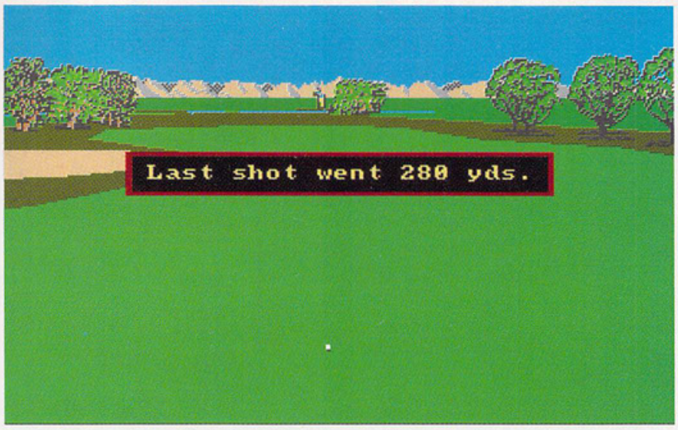
VERDICT

- **Cute as they come, and twice as hard!**
- **Great graphics and effects give the game real personality.**
- **High-speed trail-laying puzzle challenge.**
- **The longer levels can become somewhat frustrating, as there are no re-start points.**
- **An original project with a real nappy-full of gameplay.**





Teeing off into a pretty strong headwind on the first hole at Avenel. Unfortunately the breeze will take that slight snap and push it a bit off the line to land to the right of the fairway.

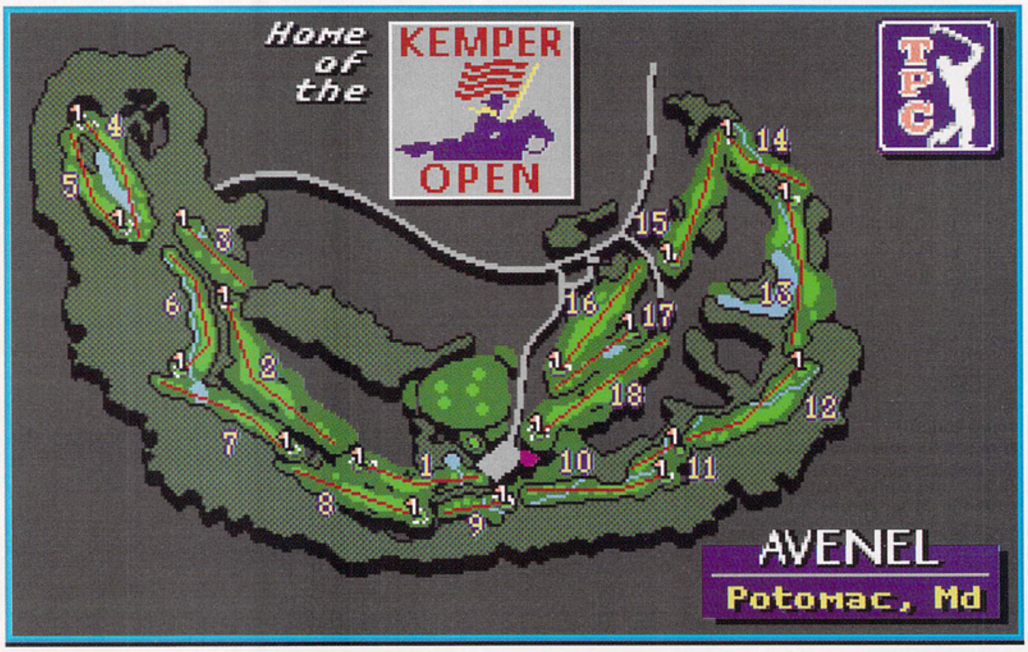


Oh, that's not too bad after all. The combination of the wind and the snap have resulted in the shot losing some distance, so a pretty long shot will be needed to hit the green.



PGA TOUR

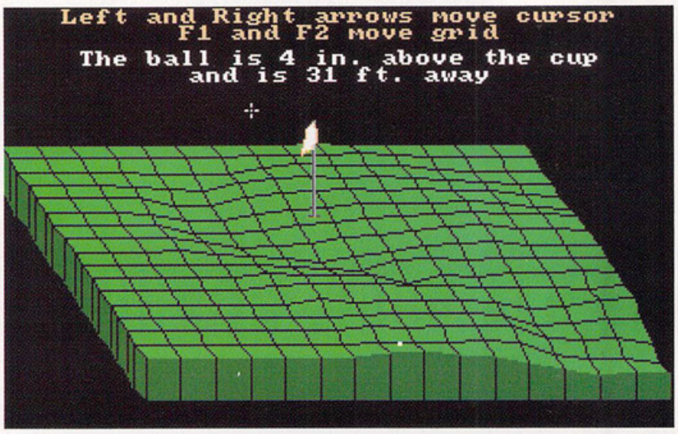
ELECTRONIC ARTS ■ £24.99 Mouse or joystick



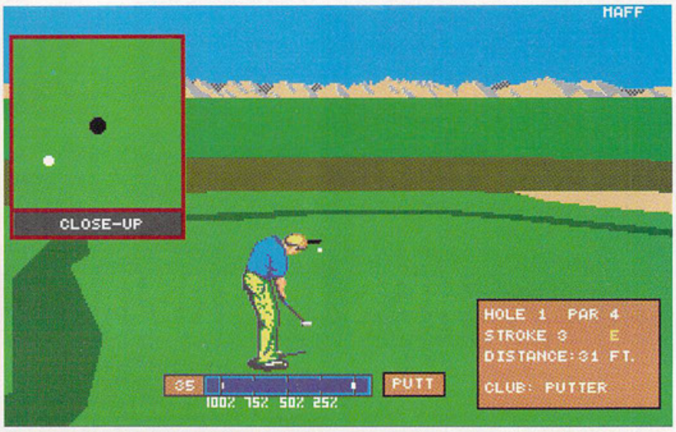
Before you start the round, you are given a lovely view of the course like the one above, which shows the Avenel Course at Potomac, Maryland. This is the course where the Kemper Open Championship is played. It's basically just for the tourist appeal, but it captures that nice golf-championship atmosphere.

If the idea of a nice, easy stroll across some fields, occasionally knocking a ball towards a hole is completely alien to you, then you're probably not a fan of that marvellous executive meeting arena, the golf course. If, on the other hand, you would love to be able to tee off with the likes of Fuzzy Zoeller but wouldn't know which end to hold the golf bat, have no fear! You are not alone! Thanks to Electronic Arts, useless club-wielders the nation over can now live out their dreams of playing the greens with *PGA Tour Golf*.

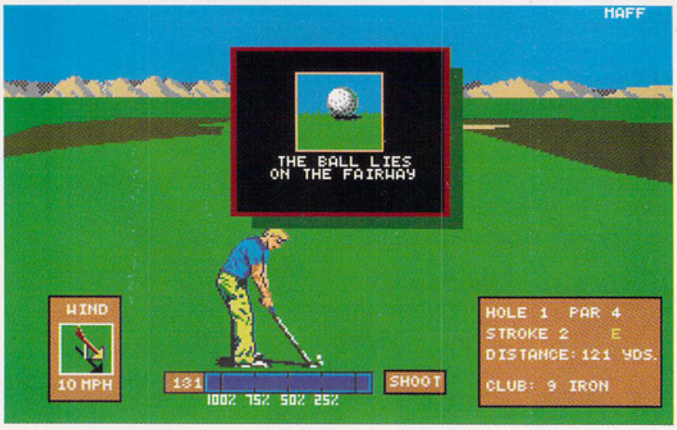
This isn't the first golf simulation to be released on the Amiga. The first effort came from US Gold



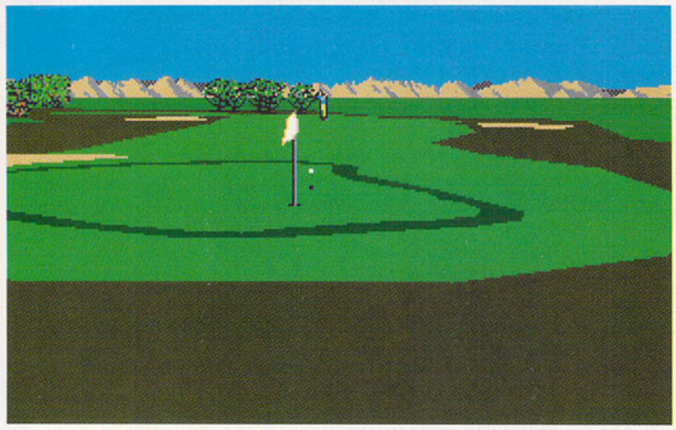
Oops! Looks as though the ball rolled away from the hole on reaching the green. Never mind, the putt is fairly level ... if you can work your way over the bumps and hollows that is!



Quite a strong putt sends the ball towards the hole. It's a close one ... is it going to be on the right line? Has it got enough power behind it to go all the way? We'll soon see...



Make a note of the lie of the ball, check the wind, gauge the distance and chip the ball up to the green. If everything goes to plan that is, you could easily land in the bunker instead!



Pretty good! That shot had just the right curl and distance to reach the pole. Measuring up for the putt shouldn't cause too much of a problem after that shot.

GOLF

in the form of *Leaderboard* and there have been a number of releases attempting to better this, including Elite's *Tournament Golf* and Gremlin's *Ultimate Golf*, with varying degrees of success.

Into the Wild Green Yonder

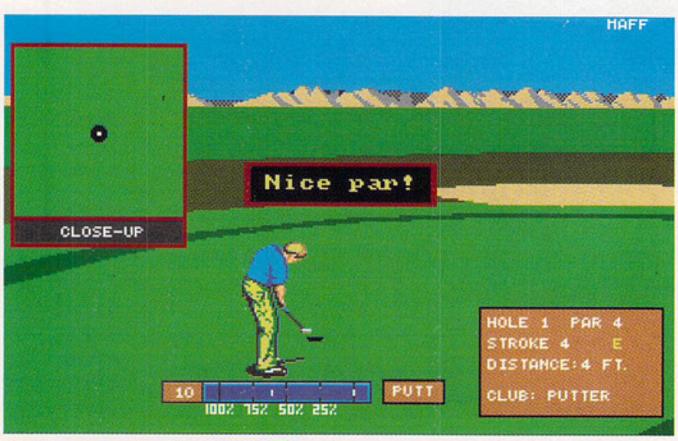
PGA Tour harks back to the purity of *Leaderboard*, concentrating on the playing techniques and fluid feel of the game rather than adding flashy extras.

The game begins in the Proshop, where new entrants must join the PGA roster before playing a game. If you don't feel confident enough to plump for a whole game, you can get a bit of practice in on the driving range or play a test round on your own. Once you've signed in, chosen your course and selected your clubs it's off to the first tee.

Before you tee off, you must make a note of the wind's strength and direction, aiming your shot accordingly. Once you're happy with the direction, you can start your swing. The shot is controlled by a bar at the bottom of the screen. The bar climbs left as the power increases until the button is pressed to begin the down-swing. Now the swing has to be stopped as close to the snap line as possible to hit the shot straight, since any deviation will cause the shot to be hooked or sliced.

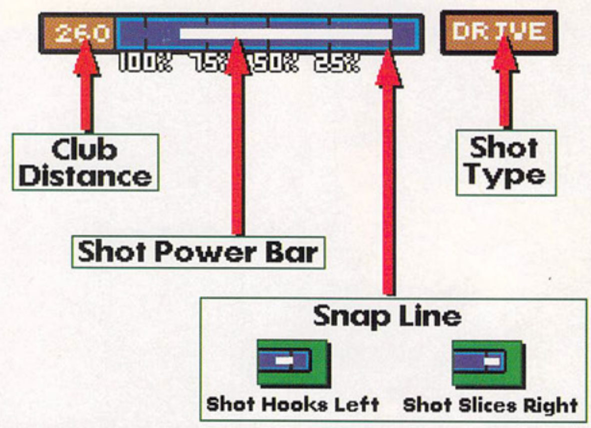
Once the shot has been taken, the camera swings round to show your shot landing and you are given information on the ball lie and shot distance ready for your next attempt. Once you've sunk the ball, details are fed into the score computer and you are told of your placings. Score in the top rankings and you go onto the next round.

Simulating a skillful game like golf is always a rather dodgy prospect. It becomes all too easy to load the game with too many fiddly sort of shot options and presentation details so that the game gets lost in a swamp of flash graphics and sound.



Oh dear! So close! A final short putt ensures a par anyway. Not a bad start to the round at all! You can always try to make up a shot or two on the next few holes and rise up the leaderboard.

AT THE GOLF CLUB BAR



The swing is controlled by the shot bar. One click sets the bar rising, another sets the power and starts the swing and a final click sets the snap. Split-second timing is required, so be alert!

Fetch the Tee Caddy

PGA Tour Golf does have very slick presentation and a host of options, but instead of distracting the player they add quite a lot to the proceedings. The options are very useful, allowing you to have a much greater control over play than some games, and the presentation extras such as the fly-by hole preview and fanfare intro can be turned off if they become annoying.

The feel of the gameplay is rather similar to *Leaderboard*, with the full-screen scenery and shot control method, but Electronic Arts have added much more to make the game fresh and enjoyable.

If you like a quick round now and then, but your golfing skills leave you horrendously over par at the end of the day, then try a round of *PGA Tour*. It could allow you to enjoy the game with a fraction of the frustration encountered on the greens – not to mention the saved expense of clubs being damaged when hurled into the bunker in a temper! ***Maff Evans***

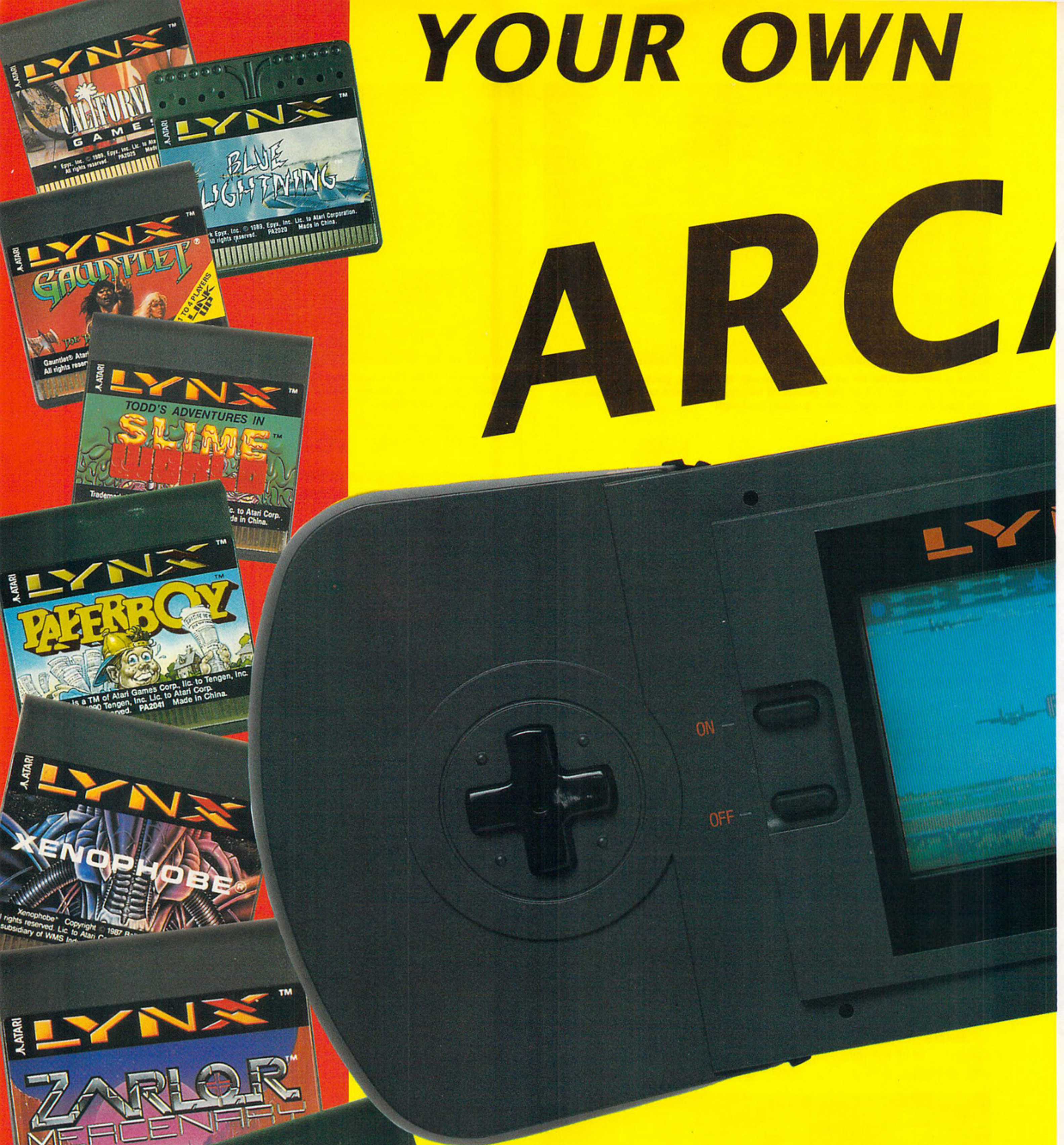
VERDICT

- **Pleasant, 3D, countryside graphics which are drawn speedily and effectively.**
- **Superb sound effects such as the swish of the club and the tweeting of birdies (aah!).**
- **Realistic action and fluid control capture the feel of the sport.**
- **Incredibly well-executed game environment and presentation system lift *PGA Tour* above other games in the field.**

90%

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ARC





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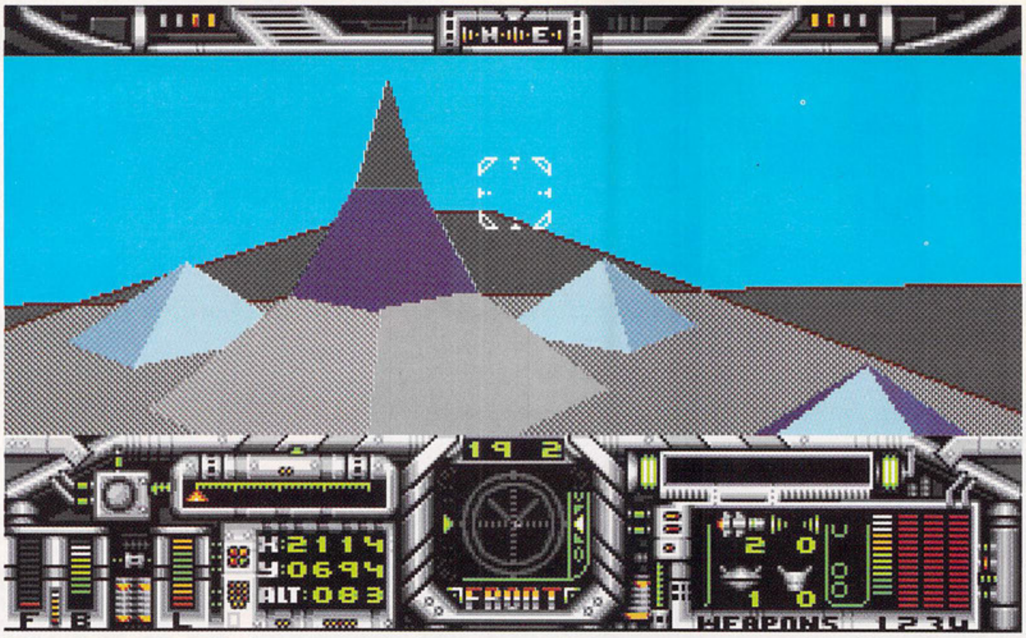
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LYNX™



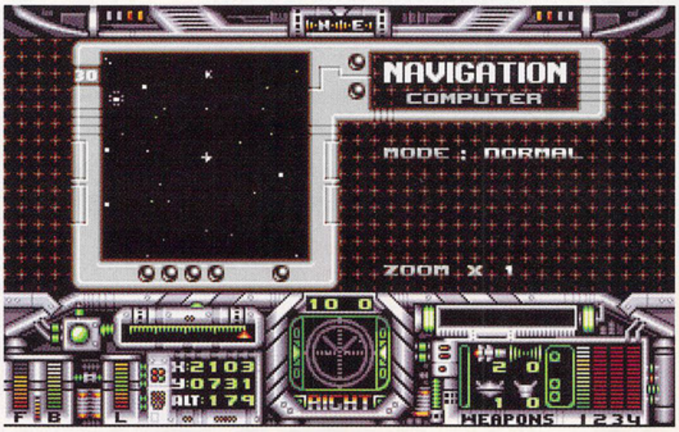


Arrive at a moonbase, factory or powerplant and you can stock up on weaponry, goods and beer. First find that square docking pad and land, then you've access to the underground settlement.

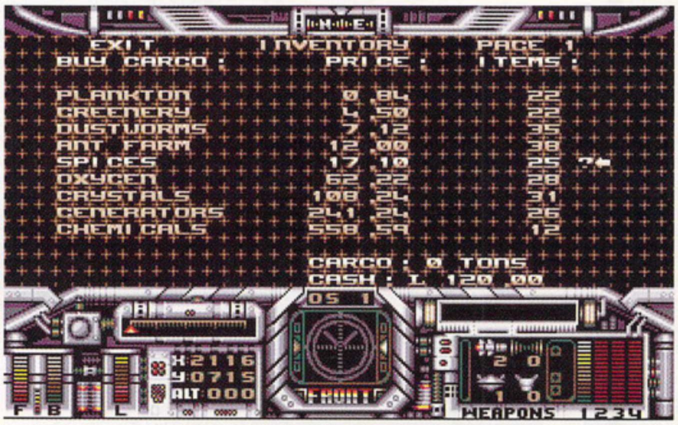
MOONFALL

HEWSON ■ £24.99 Joystick

Ever since Elite first arrived on the 8-bit scene all those aeons ago, there has been a plethora of space-trading games, aimed at creating a futuristic world where only the rich survive. *Moonfall* is set on an unruly moon populated with jaded space pilots and product-consuming terraformers.



The Nav' screen allows you to identify and then fly to new bases. It pays only to dip in here as pirates may lurk unseen on the horizon.



There's some tasty weaponry waiting to be plonked on your ship. However, you've only got 150 Lunariums at the beginning so some of those more expensive items will have to wait till Christmas.

You are a crew member from the starship Dedalus, which has been forced to crash-land on a moon called Frontier Alpha. The crew have been taken hostage and you've been given a job; completing dangerous missions for trading or bounty-hunting purposes.

The game-world is represented in full colour 3D. The screen updates are fast and there are some nice touches in here, for example the sun rises and sets plunging you into a deathly night in which rotten pirates enjoy robbing you of your hard-earned cargo.

Hey, pssst, buddy got any water?

Powerplants, factories and moonbases pepper the surface of the planet. These are represented on a navigation screen which enables you to chart your course around the moon. Each settlement has landing pads. Plonk your skimmer craft on one of these and you can enter the settlement. Enter the trading room to re-equip your ship, get some information or simply have a beer in the pub.

The trading screen enables you to buy a host of consumer desirables such as plankton, ant farms or just plain old water. The graphics at this stage show an alien chappie, who mouths off when you ask for something. He's the bloke that you've got to buy everything off, but you can't judge whether he will drive a hard bargain just by looking at him.

The prices of goods varies from place to place, which is one of the ways you can make money. On the trading screen you can also equip your ship. Armaments include mines, add-on lasers and missiles. These are essential if you're to survive more than five minutes outside the settlement. However don't expect to be able to afford the latest in state-of-the-art weaponry at your first outing.

Where's your indicator, scum?

Flying around the planet is simple. Simply work out where you want to go according to a compass, gain altitude and kick in the engines. Once you've cleared a settlement you can turn the booster rockets on. These let you zip between trading posts and are handy when there's a pirate on your tail.

There are plenty of pirates on Frontier Alpha interested in your cargo. The speed and resilience of their ships varies, so no two battles are the same. What's more, they're cocky sods, who enjoy hiding behind rock outcrops and then sticking a large missile up your bum, just as you're about to kick in the boosters. Your ship's plasma lasers are pretty ineffective against everything. Stock up on missiles however and you can ruin their day.

Andy Hutchinson

VERDICT

- Fast, and well thought out graphics.
- Difficulty rating is perfectly weighted.
- The plot of the game makes it so easy for you to get quickly involved in the game.
- Extremely derivative of everything from Elite to Resolution 101.
- An absorbing game which has been well thought out but which somewhat lacks any style of its own.



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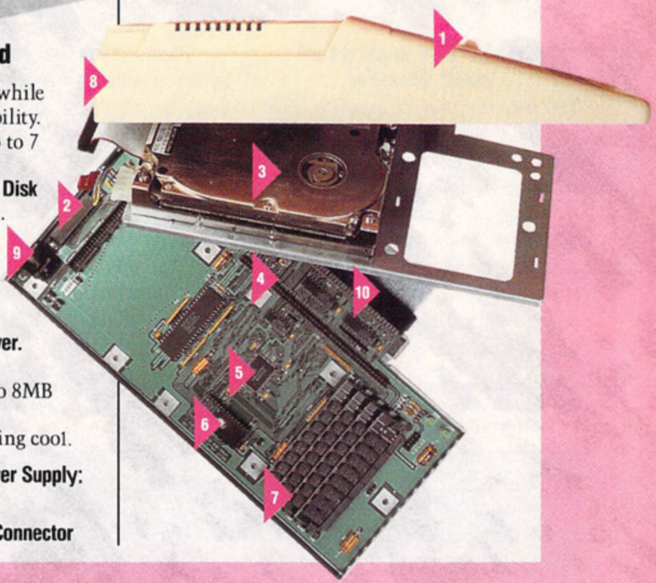
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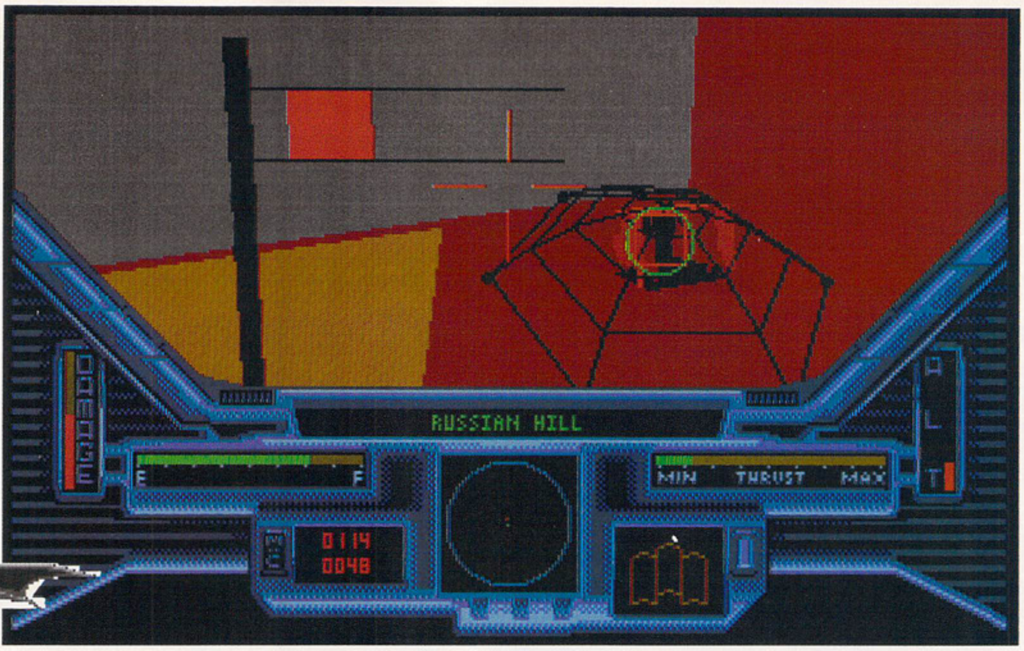
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Imagine a time in the not-too-distant future. Industrial waste output in American cities reaches an all time high causing massive pollution problems. One example of the kind of problem facing the environment is the San Francisco smog.

One day, the morning fog rolled in from the bay and mixed with the toxic chemicals in the atmosphere to form a dense layer of mist covering the city. Slowly the citizens found themselves choking on the poisonous gas. People began to die of asphyxiation, causing many to leave the lower levels and move up to the tops of skyscrapers. Once the streets were deserted, thugs and criminals began to group together, forming the evil and dangerous Black Angel gang. Day by day their reign of terror spread across the city. The legacy of the Killing Cloud had begun.



Down under the cloud, infra-reds are the only way of seeing well enough to operate. Here we see the Net Missiles in full effect, as Henri Leclerc – one of the top members of the Black Angels is pinned. Now all that remains to be done is step out, arrest him and escort the PUP back to the station house.



THE KILLING

IMAGEWORKS ■ £24.99 Mouse and keyboard

Let's be careful out there

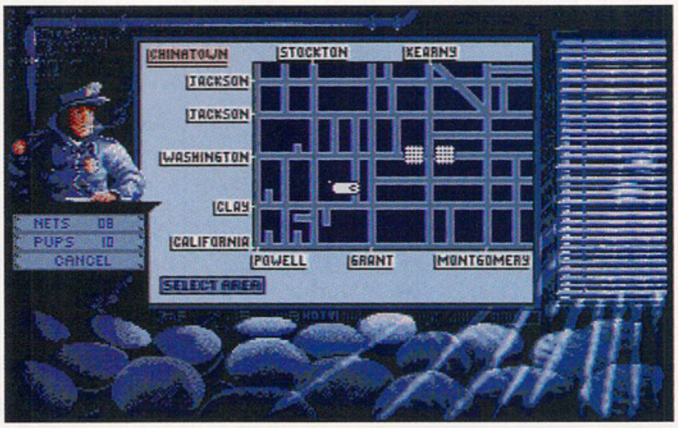
You play the part of a police biker in the San Francisco Police Department. Law enforcement has changed a lot since Dirty Harry toted his Magnum .44 and invited punks to make his day. Riding across the cityscape in a Police Hoverbike – a cross between a police car and a helicopter – your task is to chase and capture members of the Black Angels.

The game begins in the briefing room of one of the SFPD's police precincts, where you are given your assignment for the day. Once you know where you are going, you can access the city map and place back-up units on the streets.

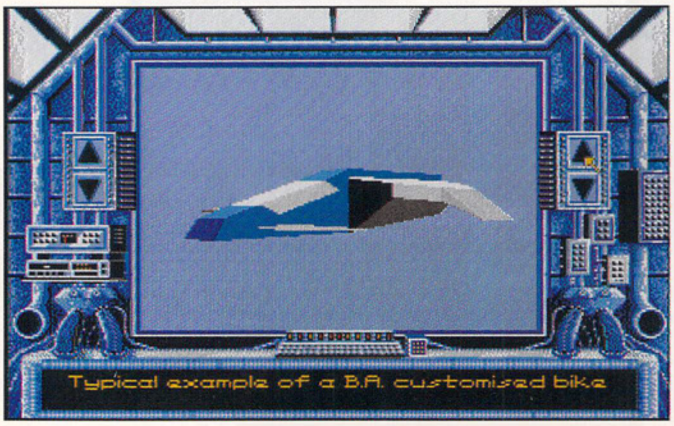
Villains must be apprehended by first capturing them in nets and then by stepping out to arrest them. There is a kind of self-piloted paddy wagon called a PUP will then swoop in to pick up the crim and take him back to the station house.

Once you've set up your mission, it's off to the armoury to kit yourself out for the mission. Here you can arm yourself with machine-

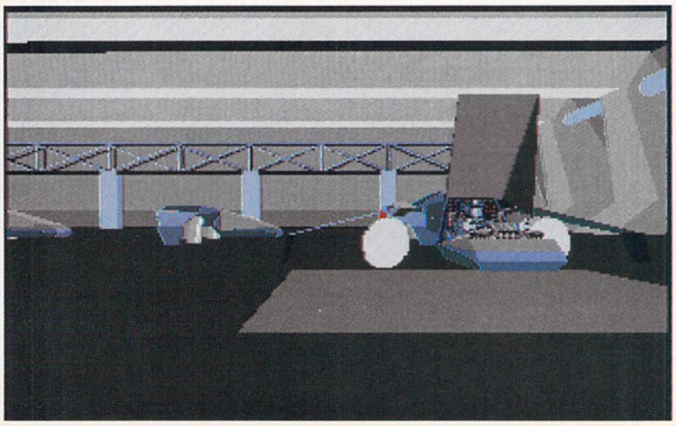
All the missions begin in the station's briefing room. Before you start, you must access the target area and prepare your back-up. Drop Net Missile pods ready to catch criminals with and PUPs to bring them in, then track them on your scanner to find the suspects.

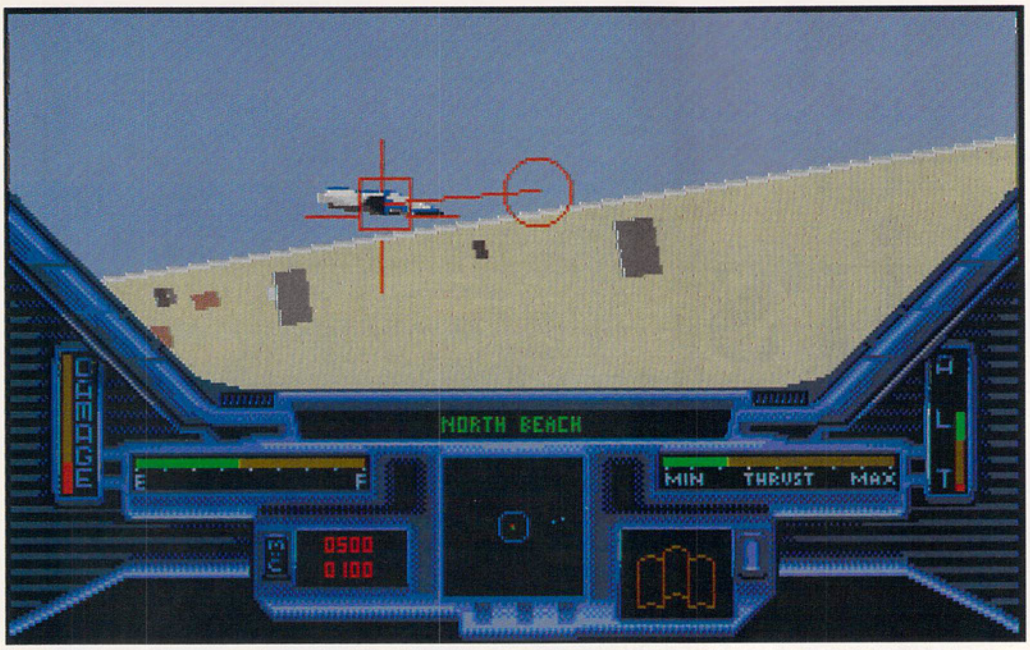


Know your enemy! This is just one of the custom jobs performed by the Black Angels on stolen bikes. Remember what they look like and be prepared to use your weapons to air them out.



An eager pilot jumps onto his hoverbike and prepares for launch. Once the canopy has closed, he's out on his own ... Just him, his bike and a fleet of Angel riders trying to nail him!





An SFPD hoverbike converted by the Black Angels screeches past your window. Follow the leading circle to aim the machine-guns and blow him out of the sky, otherwise he could cause problems as you try to make your arrest. Angel accomplices tend to destroy PUPs containing suspects, so that they can't talk.

CLOUD

guns and cannons, add an extra fuel-tank to your bike and equip yourself with a life-support suit to protect yourself from that deadly ' killing' cloud.

Bear in the air

When you're fully tooled-up, a nicely animated launch sequence appears and then it's on to the 3D flying sequence. Using your radar to spot your backup units, you can zoom down to the scene of the crime and net your suspect. Many of the gang members have accomplices that fly around making your life difficult by shooting at you, so you need to keep a careful watch!

Once the PUP has docked and you've returned to the station, you must interrogate the suspect to glean information on the Black Angels' activities. Unfortunately, the suspects have a good lawyer and some pretty hefty plea-bargaining is required to get the answers you need. If you get the bargaining right, then the prisoner will break down and confess everything he knows, allowing you to continue the investigation. If you get it wrong and he walks.

I'm a motorcycle rider

To begin with *The Killing Cloud* is laden with a futuristic, oppressive atmosphere which promises a great deal, and once into the 3D flying and battling section the game gets quite exciting. However there are times when the game progresses in a wildly illogical fashion. The interrogation sequence is one of the more frustrating sections, since you are told that the prisoner can trade years off his sentence for information.

The answers, however, are triggered by offering a certain reduction in one go, so that if you don't offer enough on a particular go, you get no info and their sentence is reduced anyway! Also, what happens to the missiles on your ship and the PUPs that return home? They vanish, that's what!

This is a shame, since these annoying quirks let down what is otherwise an enjoyable game. The introduction graphics and selection screens set a dark and moody atmosphere which is heightened by the fun 3D sections, but the whole thing tends to fall apart a little in other sections.

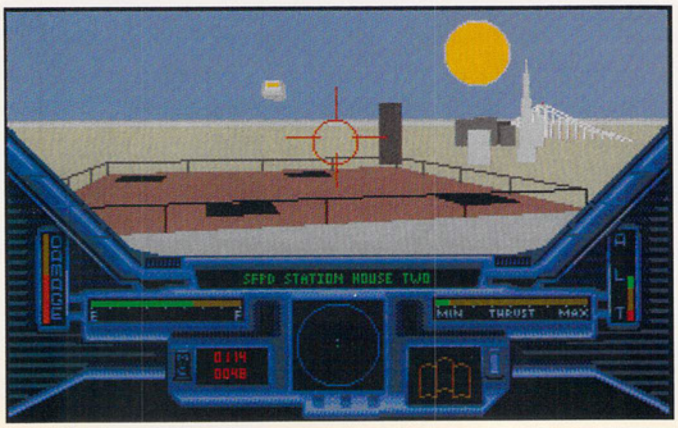
If you're a patient person, then you will find *The Killing Cloud* a challenging, futuristic shoot-em-up. If, on the other hand, you like your blasts to be quick, racy and frantic, you may end up incredibly frustrated. ***Maff Evans***

VERDICT

- Good intro-sequences and graphics manage to set the mood and tone perfectly.
- The challenging 3D flying sequences are fast and good fun.
- The disk access is unfortunately rather slow, breaking the atmosphere to a certain extent.
- The game, as a whole, is let down by some glaring inconsistencies and somewhat illogical gameplay elements.
- A good science fiction search-and-shoot-em-up which is let down by some of the game's unfortunate quirks.

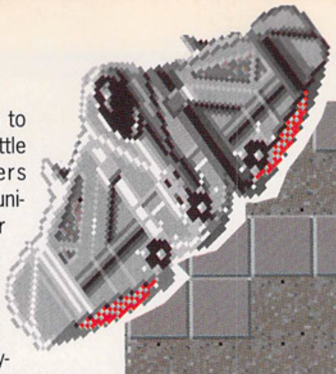
80%

A successful trip under the clouds and a suspect has been picked up. Now it's just a case of following the PUP to the station and making sure that he survives, then it's on with the interrogation.



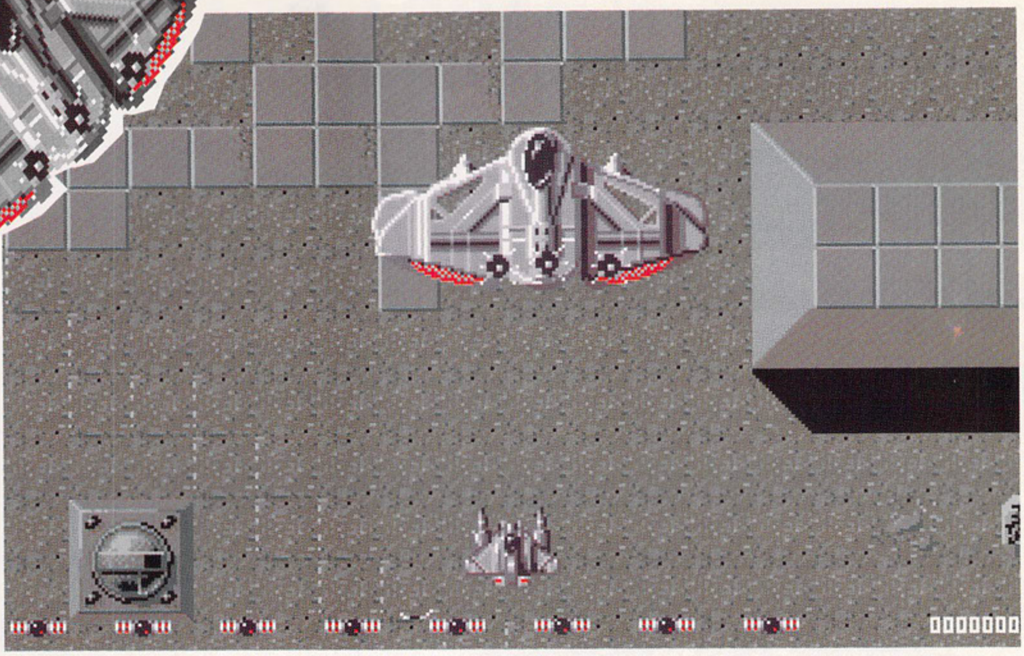
Henri Leclerc grins widely during interrogation. Strange behaviour for a villain in custody? Perhaps, but his lawyer is whittling away years of his sentence before you find out what you need to know.





When it comes to bolshy little space-fighters blasting around the universe there has never really been the freedom to operate outside anything other than a horizontal or vertical corridor. But not anymore. In *Battlestorm,* thanks to some innovative multi-directional scrolling, you can loop-the-loop, zigzag and somersault just about anywhere you want.

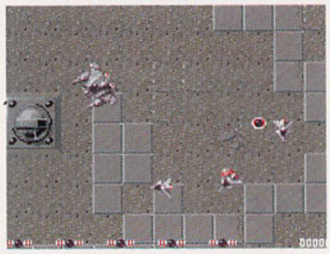
Each level is laid out as a square, with gun emplacements set into the ground which spit bullets, while enemy fighters bombard you in droves. Once the last fighter of an attacking group is destroyed you collect extra lives by picking up the dainty pink pods they leave behind. Every so often the speed, fire-power and all-round pluck of both you and your opponents is increased by the arrival of a mothership on the grid. An arrow signals her whereabouts so that you can go and do the business (look out, she leaves mines in her path) and pick up more pink pods.



Here's the mothership which crops up at pretty regular intervals throughout the levels (well, the first level at least). An arrow appears on the screen to point you in the right direction and then it's just a case of you dodging the mines it drops and shooting it up the behind.

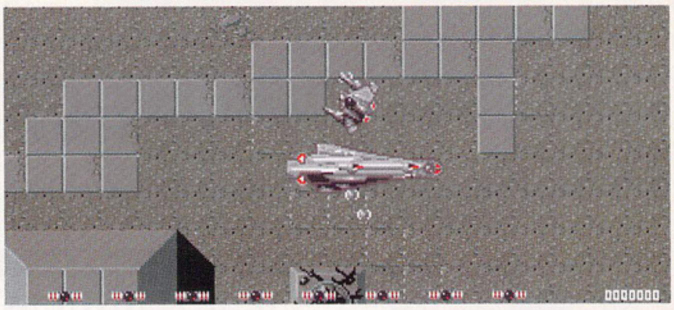
BATTLESTORM

TITUS ■ £24.99 joystick



These little jet things are deadly as poo and whiz round you in circles. (Don't panic though – just stay in one spot and blast as they come round.)

The initial problem with *Battlestorm* is its multi-directional scrolling and henceforth the odd joystick control systems. There are two types to choose from. The first, and most natural, is where 'down' corresponds to your fighter moving down the screen, while the second simulates how you'd be pushing and pulling the stick if you were actually sitting in the cockpit – nasty when you think about it, because pressing 'up' can make your ship do the exact opposite.



These fighter planes zip across the screen from left to right spewing out lots of horrible bombs. You get some power-up or something if you manage to blow them to bits.

Eventually the battle gets so fierce and an even bigger, badder battleship cruises in. Shortly you will either be dead or will have reached the second half of the level. Played over the same territory, but vertically scrolling, it sends you up screen to attack an end-of-level gun emplacement.

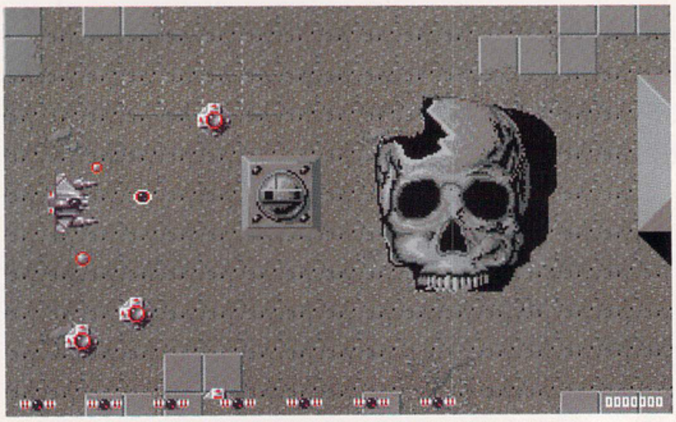
Get down ship

Once you've cracked the controls, though, the game comes alive. The overhead view zips around with beautiful smoothness and clarity. There are three difficulty modes, but even the easiest is pitched at a demandingly high level, which ensures *Battlestorm* is always a challenge. It's best not to dash around; take out the gun emplacements in one area and stay there. Then you don't have to put up with so much fire-power being aimed at you and there's more time for thought in-between enemy attacks.

Extra dimensions

It may not have the breadth and grandeur of a game like *SWIV* – it remains a rather plain game to look at despite its silky scroll, and there could have been a bit more to it – but it does make up for this with the dimensions of its playing area. In fact, it may be setting a standard that other programmers could well be emulating in the not-too-distant future.

If you want the kind of relentless shoot-em-up that will have your stick clutched in a sweaty palm while you dart around the monitor then *Battlestorm* just about takes the biscuit. ***Andy Ide***

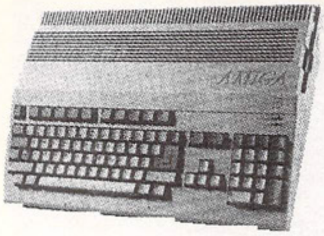


Note the red power-up that's about to gobbled – it'll give me an extra life. Oh, and watch out for the gun emplacement lodged in the ground. It opens up and shoots you just when you're not expecting it.

VERDICT

- **Very nippy spaceship shoot-em-up.**
- **Super-smooth multi-directional scrolling.**
- **Well pitched difficulty gradient.**
- **Could have had a few more levels.**
- **Enemies become slightly repetitive.**





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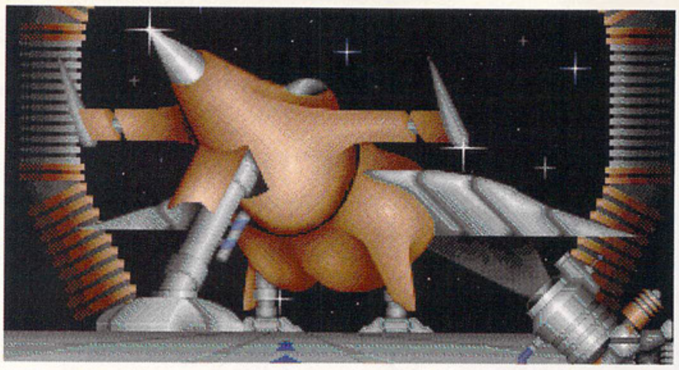
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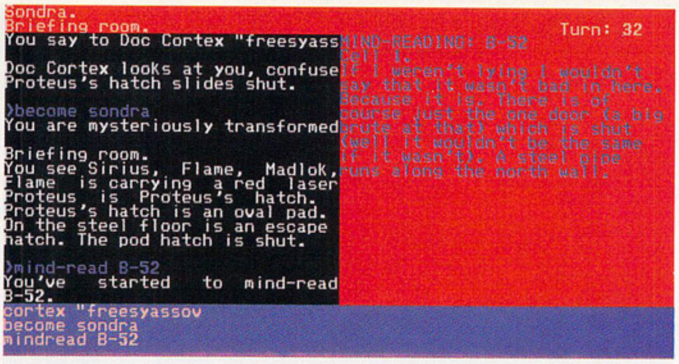
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After becoming Sondra you have the ability to mindread, folks. Not just people you're talking to, but anyone, anywhere in the galaxy. Here she is snooping on B-52, the mad war droid. An interesting experience.

DEMONIAK

PURE FICTION ■ £24.99 Keyboard



Doc Cortex, the cleverest man in the entire universe. He leads the team and has masses of hints up his sleeve, if you can find it!

Demoniak has arrived. This is not good news. This Demoniak chap you see, is a large demon from a parallel universe, who enjoys enslaving entire planets. Normal future mythology would have mankind's shiny space fleets whizing out and bombing the beast. Mankind's state however, in this future view, bears sad similarities to the present day. The world is in a mess and we couldn't organise a round of drinks in a distillery, let alone a galactic strike force. Thus, world-saving is left in the hands of private enterprise.

Luckily one man has his act together, a certain Doc Cortex, the cleverest man in the entire universe. He calls together a band of costumed misfits (known as superheroes) to help him build the ultimate bomb, the only thing that can stop Demoniak.

Wot no sprites?

Demoniak marks a brave departure for Palace/Pure Fiction, as it is a text adventure. Popular in the early days of computing the format has been largely forgotten since the 16-bits made it big, because these machines allowed glorious pictures and sounds while adventuring, why be satisfied with mere text?

In *Demoniak* the descriptions and story rattles across the main games screen, while you interrupt the game interjecting actions for the characters you currently control by entering text commands.

Traditionally, there would have been no choice of the character you control but in *Demoniak*, it can be any one of 50 characters, who all have a different view of events. So during the game you're leaping around a galaxy of planets and personas, aiding the gang of five (Doc Cortex, Sondra the psychic, Flame the fire girl, Sirius the muscle and Madlok the magician) in their quest.

Psychological problems

The worlds the team visit are crazy places and a black, nihilistic humour pervades the whole game. Each of the 50 characters you can become has psychological problems that loom large just when you need it least. To achieve free movement, you need to appreciate the games amusingly warped perspective. Then it becomes clear how to encourage folk to do stuff their predetermined character would never dream of.

The 50 peeps on offer all have defined characteristics and objectives, so the curious will have great fun becoming periphery players and pushing the Demoniak universe to its logically mad conclusion. The mind-reader Sondra is fun, because her psychic abilities let you 'watch' the thoughts of the person she's talking to.

No escape

Despite the new concepts added to the formula, *Demoniak* is unable to escape its text adventure roots. The logic 'parser' (text/game interface) is more intelligent than your average textual bash, allowing compound sentences and short-cut commands. You are still forced, though, to master the syntax system to succeed and annoyance is inevitable as this process runs its course. Typing the wrong commands earn a "you do not need to use the word ..." and a vicious circle of hurried and frustrated key bashing commences.

The limitations of the text adventure mode cannot be held against *Demoniak*, as it forces the form and frees it considerably from previous constraints. Thrills are few, excitement sparse but the challenge of a 50-way logical puzzle – 49 more than usual – is intriguing! Refreshingly, the combat is particularly flexible and reasonably tense. You can even become your enemy and mess with their happy fighting thoughts. Despite these saving graces *Demoniak*, will only appeal to those who enjoyed the works of Infocom and Magnetic Scrolls. Further developments are promised by the Pure Fiction system, as it evolves and throws off its text-only chains. *Demoniak* is good but is limited by its chosen form. ***Trenton Webb***



The ice prison planet of Freesyassov. It's run by Mr Buikk, a warden who likes to punish everyone, even himself! It has to be visited though, if you're to win.



Madlok, magician and serial killer. A member of your team; you must use his spell capabilities to help defeat the hordes of Demoniak.

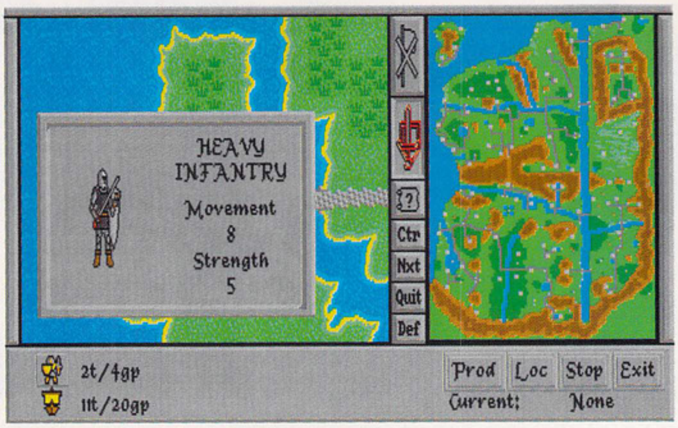
VERDICT

- Brave reworking of the text adventure format.
- Can be immensely frustrating when the possible appears impossible.
- 'Wait' feature lets the story run on while you watch/read.
- Excellent still graphic screens and great animated intro.
- Great concept, though hindered by the inherent limitations of the format.

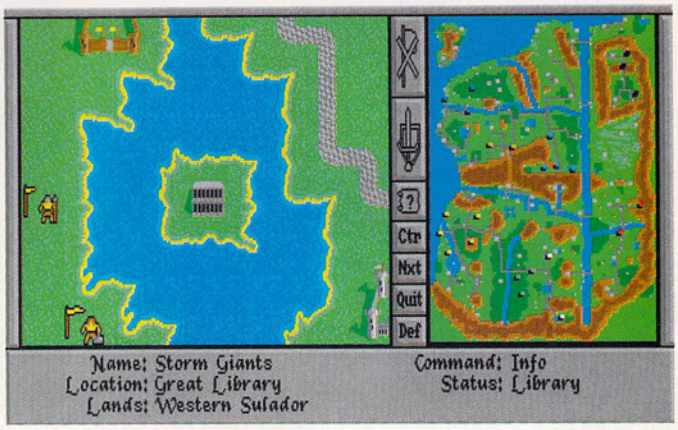




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When a castle is captured you can start it working for you right away. It shows you the type of troops you'll be able to turn out. This, being a sea port, is able to build ships. The number of turns and cost of producing a unit is indicated next to the icon. You can also view a units stats in the main window to help make your decision.



As well as waging war, there's much to explore too. That island in the centre of the screen houses the Great Library. If you can get a hero across those waters, who knows what secrets can be uncovered? (In fact, you're likely to find either an artifact, allies or information, depending of the type of location you're looking in.)

WARLORDS

STRATEGIC STUDIES GROUP ■ £29.99

Keyboard and Mouse (one Meg required)

When a race becomes a civilisation, there's only one clear path forward: war. *Warlords* is a fantasy-based war-game. Eight players battle it out to become the ruler of the fabled land of Illuria. Each has the same aim: to kill their chosen race of peoples to until they are the only ones left in the land. (So much for love thy neighbour.)

This end is met, in the main, by fighting each other and capturing one another's territory. A number of castles cover the landscape, 80 in all. The key to the kingdom is to capture every last one of these strongholds. At the offset all but eight are neutral (but still, these are no push-over).

Captured castles produce troops, which can be sent out to capture yet more fortresses. This is the way that the empires expand, inevitably encroaching on to each other's territory and leading to conflict.

It's not all down to brute force. There are other more subtle ways to further your cause. Being fantasy based, the search for powerful magical artefacts can aid you in your war efforts. Alliances can be made between human and computer players – and just as easily broken.

Not daft

An awful lot of computer intelligence is apparent. When moving from one location to another, for instance, the computer will work out your most movement-efficient route. Simply click on your destination and the piece will skirt round rivers or along roads if that's the quickest, rather than the most direct, way.

Make no mistake, *Warlords* is a long and involved strategy game, taking days rather than hours to come to its conclusion. For this reason the save-game command is jolly useful, and allows you to return to long campaigns at your own convenience.

As you get further and further into the game you get more and more pieces, inevitably, under your control. It gets difficult to remember exactly what all your pieces were supposed to be doing. There are a number of special functions that are intended to make this somewhat easier, but it still can be rather confusing.

Playing at war

For a war-game of such obvious complexity *Warlords* is surprisingly intuitive to use. Right at the beginning of the manual, a step-by-step tutorial guides you through your first movements. From there on in you quickly get the hang of things, and you soon will be slaughtering your foes with a vengeance.

Not that they're that easy to slaughter, mind. To win you have to be victorious over the seven other clans. Each computer player can be independently set to play at a variety of difficulty levels, and you can vary the competence of the opposition to provide as easy or as challenging a game as you like.

Playing against human opposition adds more to the game, as you can gang up on the computer players (or, depending on how treacherous you are, you can go straight for each other's throats).

Warlords is a deep and challenging game that can be picked up almost from the word go. It does take a long time to play, but that will be a bonus, rather than a disadvantage, to the serious wargamer. ***Adam Waring***

THE HITCHHIKER'S GUIDE TO ILLURIA



1 The main window on the world. This close-up view shows the local area in all its glory. Here is where you see your troops and castles – and those of your enemies!

2 This row of buttons is mainly concerned with making your armies easier to manipulate. It gets more useful later on when things start to get confusing.

3 Overall map of the continent of Illuria. Here you see everything there is to see, but you'll need to zoom in for a more detailed view. Click in this area to get there quickly.

4 The status panel tells you what's going on. Most of the text from the computer to you appears in this area, such as information about the terrain, and troop details.

VERDICT

- **The computer plays a very 'Intelligent' game.**
- **It's easy to pick up, but will still retain new levels of intrigue.**
- **Can get a bit bogged down when you have a large number of armies to command.**
- **Even the shortest games will take many, many hours.**

85%

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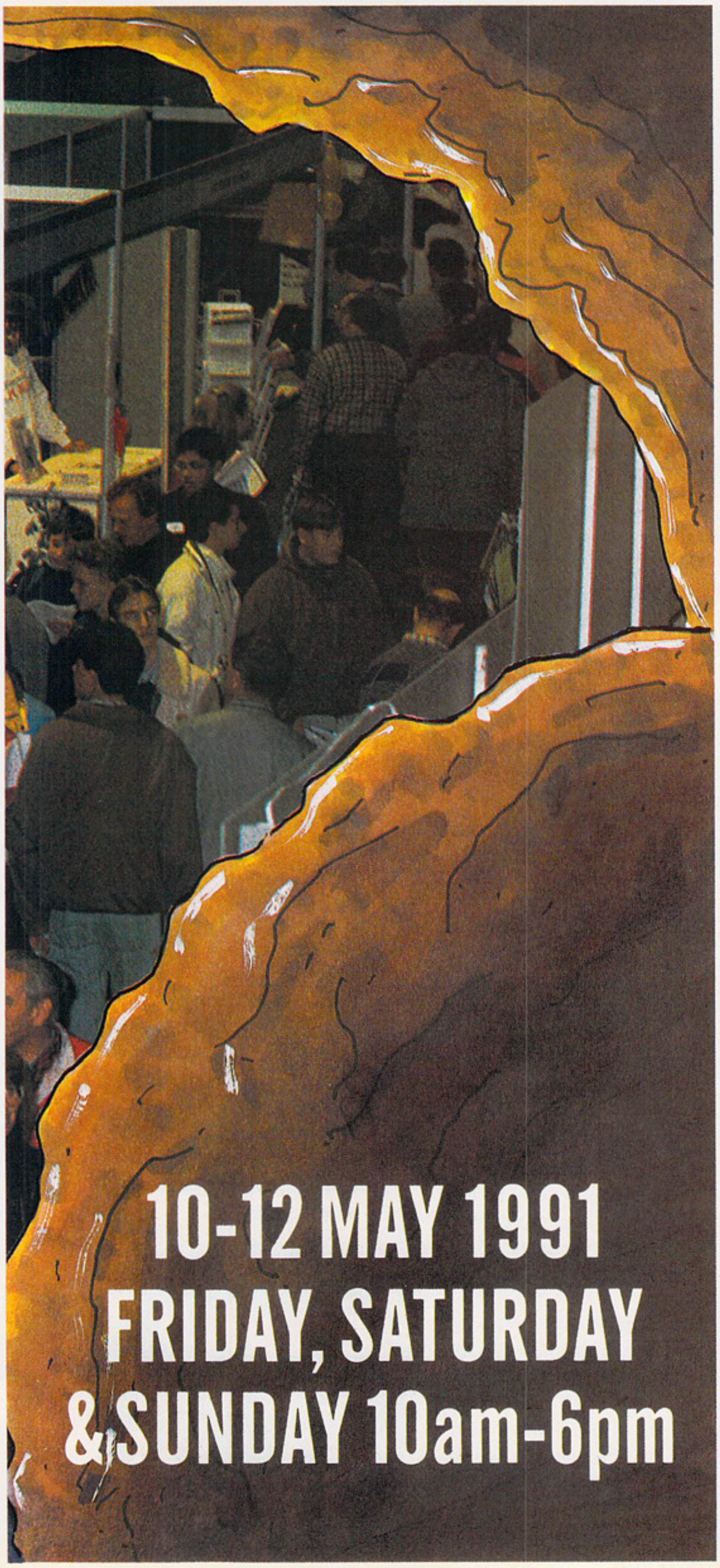
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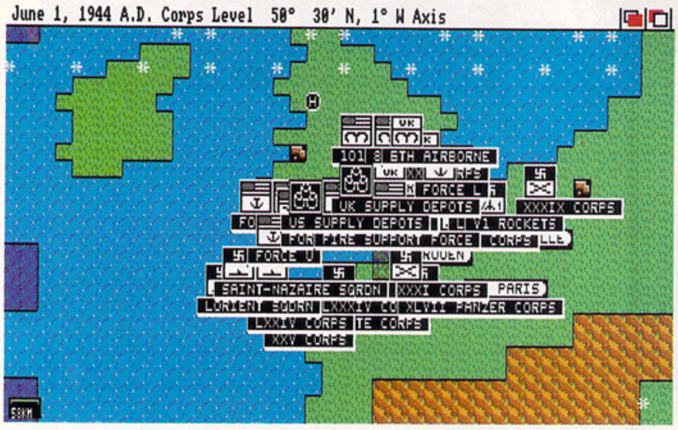
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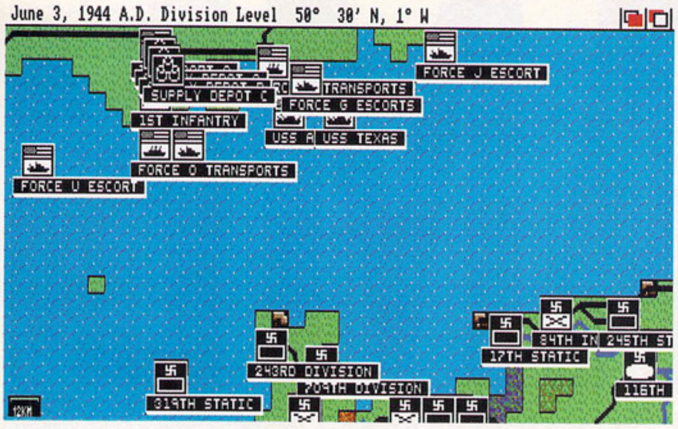
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Operation Overlord: The weather for the forthcoming landings look good. A few rogue thunderstorms are loitering in the North, but the Channel looks clear (of weather, at least).



Shades of *Dad's Army*, but with none of the humour. The Germans and the Allies practice sabre-rattling across the Channel. Would the outcome have been different if Hitler had planned it all on *UMS II*?

UMS II

RAINBIRD ■ £29.99 Mouse

The original *Universal Military Simulator* was one of the great successes in the wargaming genre. Several *UMS* scenarios were released following its acclaim, featuring the Vietnam conflict, the American Civil War and Napoleon's Waterloo. Die hard wargamers at last had something near the power of a good board-game.

But like war itself *UMS* has escalated. The next logical advance – global conflict replaces the mere corner of a foreign field. Now anywhere is capable of being an arena for mass-destruction.

New model army

The reason for this is simple – *UMS's* designers, Intergalactic Development Inc, felt a need to simulate modern-day warfare, especially great battles like World War Two, which could not be represented in the old-style *UMS.* The solution was to start again, and attempt to represent the whole of the planet Earth.

The digitising of the world was a difficult, but not impossible, task which turned out very well. The process yielded some interesting side effects, which were included in *UMS II* purely to give extra realism. As a result, *UMS II* features weather systems, temperature zones, thunderstorms and barometric pressure variations all over the Earth's surface. These factors are taken into consideration while you fight. Fancy an attack over occupied France when the rain's chucking it down? Not me!

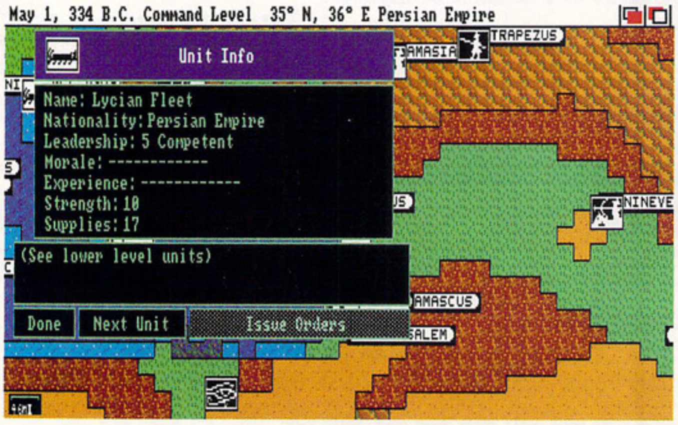
Aside from the Ian McGaskill-type extras, *UMS II* is miles more advanced than its predecessor. It has improved battle-algorithms which take into account things like government control. You can now influence the way your armies fight by altering the amount of money spent 'back home' on rebuilding, producing more weapons and so on. Production budgets, and tax rates can affect the population, which in turn affects a parameter known as National Will. A country with a low will fights badly and produces less – so the emphasis on state control and planning is increased in *UMS II.*

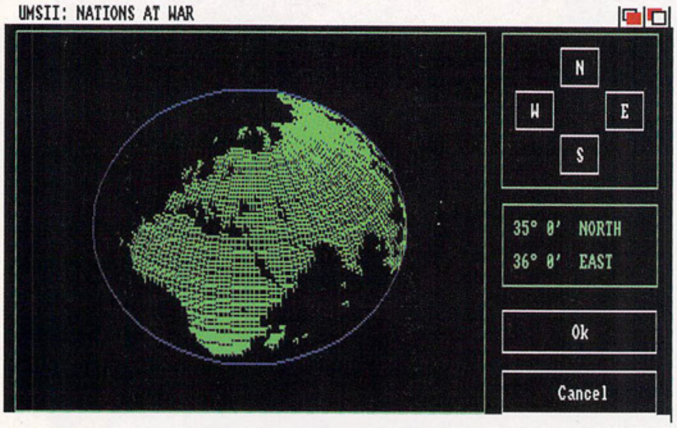
Other new elements of the conflict systems include transport capability and battle reports. These enable you to ship units all over the world, using point-and-click type controls to direct the various units. Units can be made to transport other units – like ships carrying infantry, planes carrying paratroops – and these can all be deployed as the battle progresses. Finding how battles are proceeding is easy, despite the possibility of many more simultaneous firefights than was possible in *UMS.* Battle reports appear whenever two units come into contact, and you have the choice to pile in and assist, or give the order to retreat – or you can just leave them to get on with it, while hoping for the best.

War stomping

UMS II is supplied with three scenarios – Alexander the Great's stomp of AD 334, the D-Day landings in 1944 and Napoleon's triumphs of 1805. More are promised for the future. Each of the scenarios can be played repeatedly, attempting different strategies and playing whichever side you desire. You can even play both sides (or more than two in the case of Alexander's foes) for true sado-masochism! **Neil Jackson**

Individual units can be examined by double-clicking on their icons. Statistics which affect their performance often change as units are attacked, broken and routed.



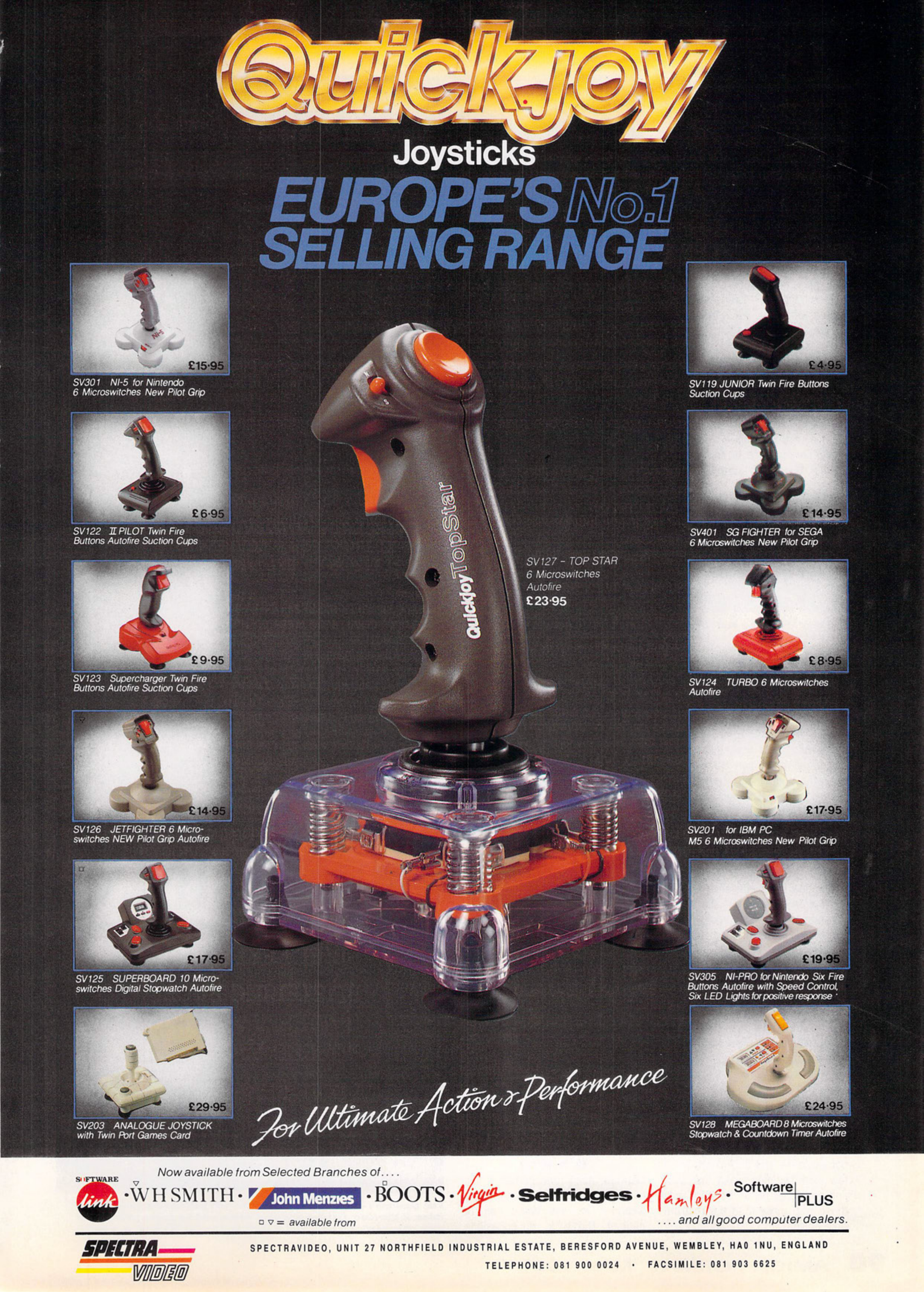


The orbital view shows the world from space. You can rotate it and examine the entire surface, but it serves little purpose in *UMS II's* current condition. Later add-on scenarios may be different...

VERDICT

- **Excellent military strategies in-built – beginners can learn simply by example.**
- **Screen displays are unfortunately a bit staid and ugly– but they do the job.**
- **Moves take a long time to be deciphered – game progresses slowly as a result.**
- **Little imaginative use of sound or colour.**
- **Destined to expand as different scenarios are developed.**




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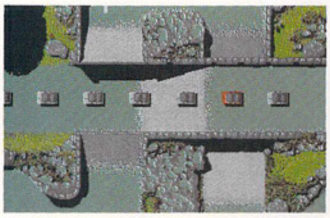
SUPERC

GREMLIN GRAPHICS ■ £24.99 Joystick

Gremlin have been living in the fast lane since they launched *Lotus Turbo Challenge*. Determined not to be typecast as producers of racing games, they promptly put *Toyota Rally* and *Team Suzuki* on the starting grid. Now comes *Supercars 2*, a different approach to a very familiar theme.

Supercars is an overhead, round the houses, blast. Using the stick to turn, you go head-to-head with nine other racers around a course full of jumps, bends, bridges and other cars. The aim is simple, finish in the top five and qualify for the next race. The winners get heaps of cash to lavish on their motor, turning it into a high-speed killing machine that will take all comers.

Supercars could be played against the machine or against someone you used to call a friend – until they win and you don't.



And they're off! The start of track two and you begin at the back. Still it gives you plenty of targets. The first corner's really tight so make way or die, suckers!

Either way its a race to the line, over an increasing number of laps. At your disposal are guns, bombs, mines and other assorted military hardware which can be used to trash the opposition. The resultant race is a barging, pushing, shoving, bumping, boring and highly-illegal road-race epic.

Give me a brake

There are two ways to control the motor and the game defaults to a fire button accelerator: the longer you press, the faster you go. The alternative, faster method uses the fire-button to brake, while the power is continuous. This leaves you free to concentrate on steering, bending the stick left and right to get around corners. Forward and back commands are saved for the weapons, launching missiles or mines in the respective direction.

The controls are few, but it gets kind of hectic once the flag drops. Even the biggest tracks are only three cars wide, which means passing relies more on fire-power than driver skill. After being shot a car explodes and disappears for a few brief seconds. Take that shot and grab their place, because only those who make it to the rostrum race again.

While the opponents require fire-power and horsepower to beat you, the tracks themselves demand driver skill. On the later tracks jumps and tunnels appear. Line is vital for both. Take a jump wrong and you end up in the rough, quickly killing your car. The tunnels hide the car, so you have to get lined up correctly before entering, then following the scroll as it tracks the invisible motor up screen.

It's war

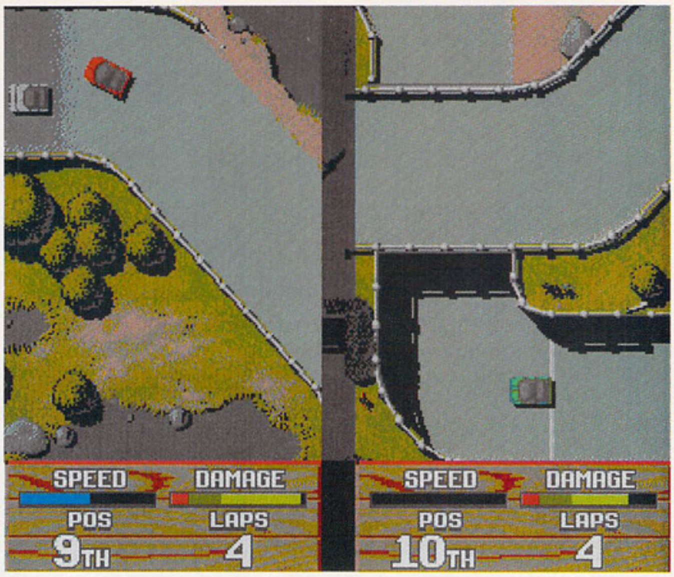
Between each race comes a visit to the parts shop, where better weapons or mechanics can be nabbed. Thrown in, on occasions,



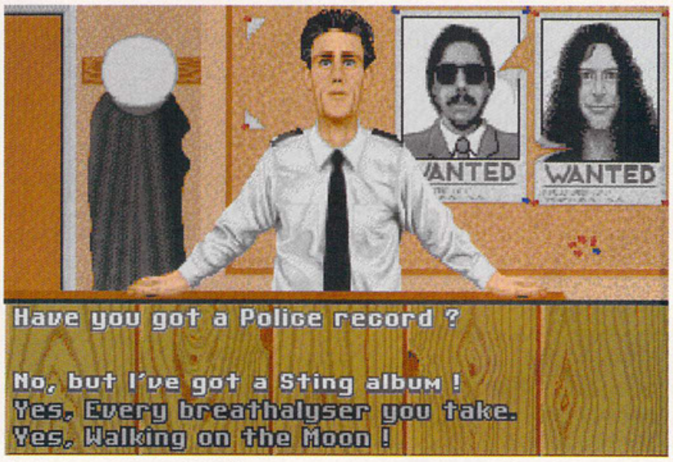
The chairman of the racing committee will interrogate you on the rules of the road. Get the answers wrong and he docks points from your championship total. Get it right and he will walk off in a huff.

One of the easier courses on the *Supercars* circuit, it's full of bends, but none of them are too tight and the track's wide. To finish in the top five and qualify for the next race it's best to use missiles to knock out the opposition early on and then nick their place.





Supercars 2 is at its best in two-player mode, as you get the chance to humiliate friends and blow the up. The red car is player one, green player two. Oh, the red car and the green car had a race...



A local copper wants to know what happened at the last race and proceeds to ask a series of very silly questions. It pays not to be too flippant as the answers you give him determine the size of the fine he dishes out.

ARS 2

are random penalty/reward sections. The police, for example, take exception to folks who are using large-calibre weapons on each other. At other times mysterious Aunts announce that you may, or may not, be heir to a fortune. The answers that you give determine whether you get the fine or the dosh. No clues are available, but it doesn't always pay to be scrupulously honest.

Supercars 2 really has to struggle to get itself noticed amongst a highly distinguished pack. *Supercars I, Nitro* and *Jupiter's Masterdrive* are just a few of the top dogs, but even in this lofty company *Supercars 2* can hold its head high. The graphics are outstanding, with highly detailed landscapes, scrolling around at speed. The cars are precise, with pixel-perfect collision detection, but are slightly unconvincing when cornering. To compensate the sound here is all pained tyres.

Going head up

Supercars 2 and its ilk suffer the same problems on the game front however, regardless of how splendid the effects are. The problem lies in the long-term interest they can muster. Head-to-head, on a split screen, against a human player the competitive element gives it strength. Against the machine though, the pulling power is limited, as each player soon finds their performance plateau. The courses vary in relation to what difficulty level you've chosen, but the scope for real difference is limited. Essentially, *Supercars 2* remains a test of fine control. Your control options are limited to two directions, stop and shoot and events still get out of control.

Supercars 2 is fun to play in the short term. The introduction of the question-and-answer sections lifts *Supercars* , adding even more elements to this structurally established genre. It is a well crafted and well thought out game, but has to be one of the last stands of the genre. Virtually every avenue of gameplay enhancement has been made since the *Super Sprint* days, but if this is to be its swan-song, it's a doozy. ***Trenton Webb***

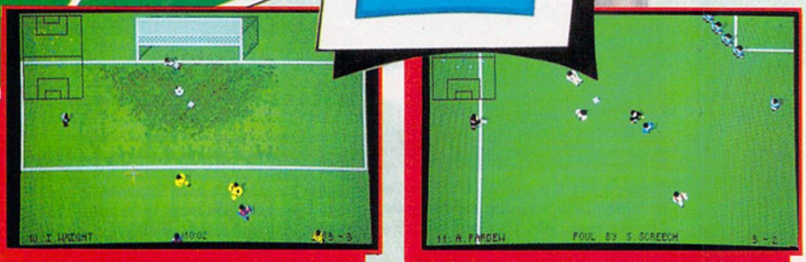
VERDICT

- Familiar overhead race game with a number of neat new twists.
- Best for two players, interest wanes quickly for the single player.
- Small classy cars, smooth scrolling tracks and some solid race sounds.
- Good treatment of an established, and somewhat aged, game formula.
- Another race spectacular from recent speed-heroes Gremlin.

80%

KICK OFF 2

A NEW DIM
SOCCER SI



Amiga Screen Shots

- BLISTERING PACE
- PIXEL PERFECT PASSING
- SUPERB TACTICAL GAMEPLAY

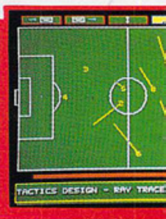
KICK OFF 2 greatly enhances the gameplay of KICK OFF, winner of the THE GAME OF THE YEAR in the U.K., and similar awards right across Europe. A host of new features have been added to the ones that enthralled players the world over.

* **Full size multi-directional scrolling pitch with the players, markings etc. in correct proportion.**
* **1 to 4 players option. (Amiga and ST only)**
* **2 players TEAM option against the computer or 2 other players. Hundreds of players each with a unique combination of attributes (stamina, pace, etc.) and skills (passing, shooting, tackling, etc.)**
* **Instinctive Kick Off joystick controls to dribble, pass, shoot, head or chip the ball and do sliding tackles.**
* **Set piece. FREE KICKS including dummies and the ability to dip the ball or bend the ball round a defensive wall.**
* **9 types of corner kicks with full control of shot power. Long and short throw ins.**
* **Team selection from a squad of 16 with substitution and a choice of tactics.**
* **League and cup competitions with Extra Time, Injury Time and sudden death penalty shoot outs.**
* **Facility to view, edit and save the Action Replays and create a Golden Shots disc.(Excl. IBM & CBM 64)**
* **Facility to load Player Manager teams and tactics for a single or league game.**
* **Red and yellow cards, 16 different referees, injury time and a host of features to create an atmosphere for a game which is real fun to play.**

ST ACTION - The best game ever to grace the ST. Highest accolade I can give.
AMIGA USER INT - The best computer game ever **97%**
THE ONE - Ultimate soccer simulation. **96%**
THE ACE - Brilliant. Buy, Buy, Buy. 930.
AMIGA FORMAT - Best footy game to have appeared on any machine. **94%**
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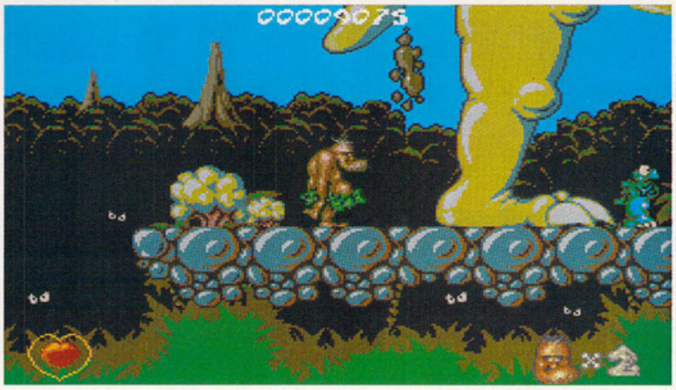
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Lost in the snowy wastes of Neanderthal Land, Chuck comes head-to-head with a killer rhino (wearing a neat fur coat). The trouble is that the little monkey behind the yeti figure is bunging snowballs at you. If they hit they force you back into the pit and results in major damage.



One of the hazards of living in prehistory is an attack of the killer dinosaur droppings. A timing challenge; this would be a messy way to go. Chuck's health is shown as a shrinking heart in the lower-left of the screen, his head shows how many lives our plucky hero has left.

CHUCK ROCK

CORE DESIGN ■ £24.99 Joystick

You really needed guts to survive in the rough, tough, world of cavemen. Luckily, that's one commodity Chuck Rock has plenty of, thanks to his strict diet of beer, chips and beer. Now Chuck must use his rotundity to save the fair Ophelia, who has been kidnapped by all round Stone Age bad guy, Gary Gravel.

Chuck uses his tum to top terrifying tyrannosauruses, bash brontosauruses and to irritate ichtyosauruses. If a beast charges him, then Chuck breathes in at the press of a fire button, and boldly bounces them with his beer gut. Alternatively, he can eponymously chuck rocks to crush the creatures. With only these two techniques at his disposal, Chuck has to conquer a five level, multi-section, platform quest that will end (cue violins) in a reunion with his good wife.

Terror 'dactyls!

Level One has our hero, leaping, bounding and running around a jungle world. Pterodactyls swoop in for the kill, tricertops butt and thorn bushes snag the bearskin-clad adventurer. Chuck has to pick his way through the Neanderthal nightmare, the emphasis is on timing and careful leaps rather than on violence. On later levels Chuck must conquer cave worlds, lagoons, ice plains and the dinosaurs' graveyard.



Oh no! Ophelia has been nabbed by the evil Gary Gritter. This is the motive for Chuck to leap into action. He needs her back, she hasn't finished the washing!

Chuck's rock-throwing doesn't just kill folk though, it is an integral aid in finishing each level as they give Chuck the ability to manipulate the scenery. Large boulders can be dropped to provide the necessary stepping stones to high platforms or carried overhead to provide makeshift shields. Carefully hurled stones can even act as counterbalances on pivoting platforms, throwing Chuck higher than he could ever jump.

Not all the creatures Chuck meets are set to do the man down. Some friendly birds wait, eager to help missing link's long-lost cousin. If the Homo-erectus Boulderous Throwius stands in front of them, then they willingly fly him to platforms new.

Stone Age graphics

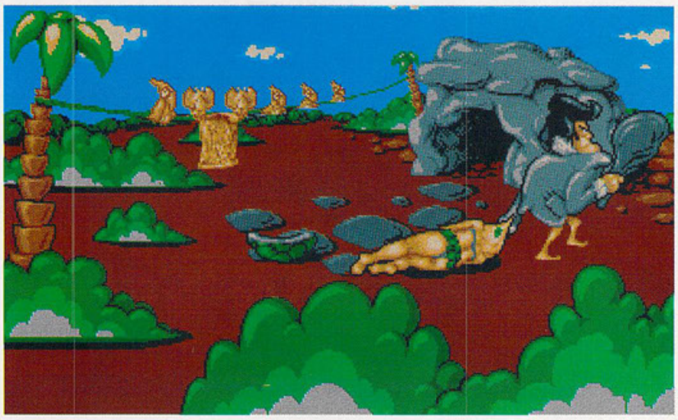
Chuck's world is a curiously amusing blend of Python's Terry Gilliam animations and Disneyesque cuteness. Chuck has a manic quality, walking in a weird manner and belly bashing foes out of his path. It is the supporting cast of deranged dinosaurs though, who complete this crazy graphic equation. All have characteristics that endear, especially as they shriek themselves to death; shivering, shuddering and shattering like Daffy Duck at double speed.

The entire effects package back the game concept well, underlining the humour and off-beat action of Chuck. A vicious Xylophone cut accompanies bonus points collection and each life starts with a gutral "Unga Bunga". No one could say that and sound intelligent, but Chuck manages to make a comatose slug look smart.

Romp and circumstance

Chuck Rock's fun, there's no getting away from it. The game follows an established formula but still manages to exhibit personality and originality. With the solid platform of graphics and sound to build upon, the reports should all be good. Everything conspires to pull you in, just like it should. The difficulty slowly mounts to replace the initial amusement as play progresses. Chuck eventually, though, leans too heavily on the toughness to provide player motivation at the expense of the humour. What started out as a cute platform romp eventually becomes a slog.

Chuck Rock is a well structured game in the mould of *Rick Dangerous* with the traps replaced by end-of-level nasties. The hero is continually faced with new challenges and permutations of the puzzles, to confound and confuse. The introduction of swimming on the later levels for example, adds new tricks to Chuck's gameplay repertoire, with the caveman struggling to hold his breath and turning blue in the process. The toughness eventually overshadows the game's personality, however Core have designed a cracking platform epic guaranteed to put players through their paces. **Trenton Webb**



Using a rock Chuck can leap to new heights. The croc' is one of the friendly animals and acts as a springboard. Chuck has to stand on one end and hurl a rock so it hits the croc's nose and throws him upwards.

VERDICT

- **A vast graphic menagerie of prehistoric beasties.**
- **A class platform runaround in the *Rick Dangerous* mould.**
- **Guts not guns; a refreshing change of attack mode.**
- **Humour fades out in favour of toughness, a real shame.**
- **Another cracking platform epic, fast, funny and infuriating.**

80%

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SP OUTRO

If Page 49 was Screenplay Intro, this must be SP Outro!

Sreenplay 'outro' (SPOutro) is the little bit of Format where all those irritating loose ends are neatly tied together – or at least that's the theory! So all those games that came in too late for a full review this ish', or were too awful to merit a page, get the treatment here.

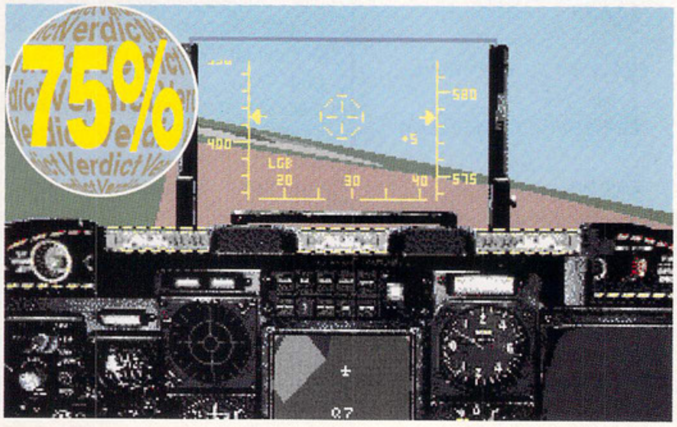
SPOUTING OUT!

There's a problem with software. It's not the program ming or control methods, but the manuals that are ment to tell you how to get the most out of your software.

We've all had moments when the aliens of Zog are flying towards you eager to bite human heads and you can't find the smart-bomb key. Slapping pause, you dig out the manual but can you find the key? No chance. Activision's *Fighter Bomber* is a prime example, the manual gave one list of key commands, but an insert card was included to give updated controls. Why couldn't the list have been put in the manual? It was important, because it contained the lock control for ground targets. *The Powermonger* manual was well produced, but it didn't tell you how to play the game except in a functional sense.

Now the people who know the games best are the coders. Their skill is writing games not manuals, and when they've spent over a year working on a project it seems more than foolish to put out a manual which doesn't do the game justice. Guessing key commands is a chore you don't after need after shelling out £25. Even publishers who take great care to be thorough with the manuals do have their problems. Usable indexes and a list of key strokes would make life a lot easier for all concerned and games more instantly accessible. We want to play your game, so help us!

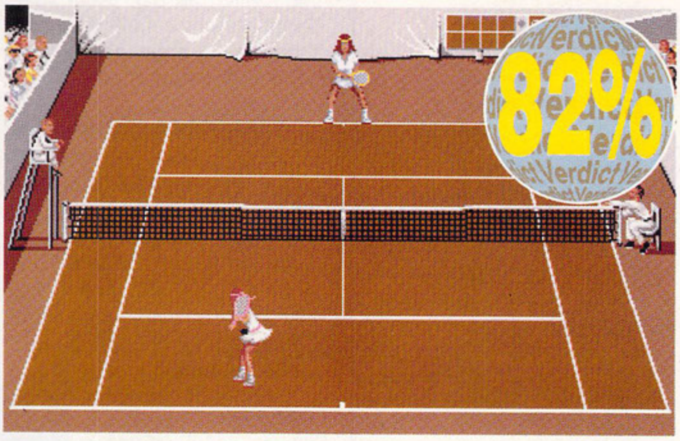
A-10 TANK KILLER



Dinamics £24.99

The wart-hog has landed. Yes, *A-10* is now being distributed in the UK. It allows you to take the stick of one of America's ugliest, but deadly of planes, in a campaign against Warsaw pact tanks. The package is filled with digitised links and fancy graphics footwork. The sim is a tad slow – even on the lowest level of detail – but it makes for an amusing blast. *A-10* has some neat features, such as wingmen missions where you fly as part of a squadron, but is best viewed as a luxury addition to any Amiga airforce as it lacks the necessary speed to cut it with front-line fliers.

PRO TENNIS TOUR 2

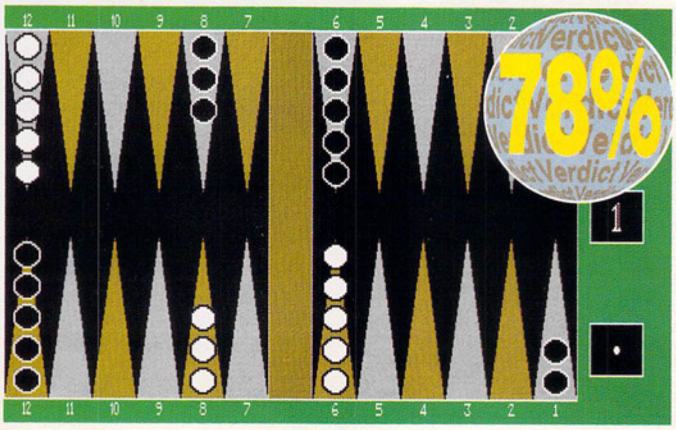


UBI Soft £24.99

PTT is back and this time it's brought a host of new strokes to its game. This one missed a full review only on the grounds of timing. Since *PTT 1* the graphics have been smartened up, as has the mobility of the players, but the major advance is the range of shot available. Backing this up is a better and more flexible choice of game to play.

A corking tennis sim it's fun, even if you don't like tennis, but does take a lot of learning if you want to be able to play and beat the computer opposition.

BACKGAMMON ROYALE



Oxford Softworks £24.99

Backgammon Royale, like *Go*, attempts to bring a board-based classic to the small screen. Featuring neat, if unimpressive opponent screens where you get to size up the next player, and a strong line in classic strategies. It has a host of other features which include a history option, where you can retrace a game from the very first move. It is best played between two humans, but the computer opponents are a good way of brushing up your game, or learning new tactics.

The Amiga Full Price Chart

Pos	Title	Publisher	Price	Rating
1 (-)	**Lemmings**	Psygnosis	£24.99	FG92%
2 (-)	**SWIV**	Storm	£24.99	FG92%
3 (-)	**Turrican II**	Rainbow Arts	£24.99	80%
4 (-)	**Speedball II**	Image Works	£24.99	FG94%
5 (-)	**Final Whistle**	Anco	£12.99	See above
6 (4)	**F-19 Stealth Fighter**	Microprose	£29.99	FG91%
7 (-)	**A-10 Tank Killer**	Sierra On Line	£34.99	75%
8 (-)	**UMS II**	Rainbird	£29.99	77%
9 (-)	**Panzer Kick Boxing**	US Gold/Futura	£24.99	See above
10 (-)	**Fists of Fury II**	Virgin	£29.99	Compilation
11 (1)	**Robocop 2**	Ocean	£24.99	80%
12 (-)	**Kick Off 2**	Anco	£24.99	FG94%
13 (2)	**Powermonger**	Electronic Arts	£29.99	FG94%
14 (5)	**Hollywood Collection**	Ocean	£24.99	Compilation
15 (24)	**M1 Tank Platoon**	MicroProse	£24.99	71%
16 (-)	**Pro Tennis Tour 2**	UBI Soft	£24.99	??%
17 (-)	**MiG 29 Fulcrum**	Domark	£34.99	FG90%
18 (-)	**Tower FRA**	Thalion	£24.99	74%
19 (-)	**Team Suzuki**	Gremlin Graphics	£24.99	88%
20 (6)	**Teenage Mutant Hero Turtles**	Mirrorsoft	£24.99	35%
21 (-)	**Elvira**	Accolade	£29.99	63%
22 (27)	**Fun School 3 (5-7)**	Database/Mandarin	£49.99	N/A
23 (6)	**Toyota Celica Rally**	Gremlin Graphics	£24.99	70%
24 (-)	**Night Shift**	US Gold	£24.99	81%
25 (-)	**Chaos Strikes Back**	Imageworks	£29.99	89%
26 (-)	**BAT UBI**	Soft	£24.99	88%
27 (-)	**Multi-Player Soccer Manager**	D&H Games	£24.99	See above
28 (14)	**Lotus Turbo Challenge**	Gremlin Graphics	£24.99	89%
29 (16)	**Wheels of Fire**	Domark	£29.99	Compilation
30 (-)	**Colossus Chess X**	CDS	£24.99	See above

Chart compiled by Gallup Ltd © 1991 European Software Publishers Association.

GO

OXFORD SOFTWORKS £24.99

Verdict **78%**



Go is one of those annoyingly simple Oriental board-games that proves incredibly popular with Occidental players. Played on a grid with basic black-and-white pieces, the concept is basic but the strategies needed to win are tortuous. Thinking four moves ahead is just about essential, and that's what makes this game a classic to play. For board-games to be successful they need few graphic twirls, just decent computer opposition. *Go*, has both with incidental screens and a fiendish variety of foes. You can also mess with the board size making it good for both beginners and experienced Go'ers.

Lemming's sip success

Lemmings make it big! The little people have taken root at number one and it's odds-on that they will need a whole bunch of bombers to shift them. The Lemm's were selling hotter than very hot cakes from day one and as their fame spreads, their sales will no doubt soar. Congratulations to DMA design and Psygnosis. A great game and a well deserved number one.

Tower over Turtles

All change! What a chart, new games have completely stormed the chart and changed what was becoming a familiar face. *Robocop 2*, last months top title, is demoted to a mere 11th slot, while a whole host of newcomers jump ahead. Only 10 games have managed to survive the assault, leaving 20 fresh spots. Some are predictable re-entries, such as *Kick Off 2*, but there are some surprises. *Tower FRA* the air-control sim beats the *Turtles*, what does this say about society? Are we becoming 'growed-up' or something?



Warhead

Curious! Spooky Mr Warhead has raised his head in the software charts. The top 30 forces contain Stealth Fighters, A-10 Thunderbolts, an M1 Tank and a MiG 29, while Universal Military Simulator II puts in an appearance just to organise hostilities. Wonder why that is?

ABOVE

Due to the limits of space and time (in magazine terms, not philosophically) some games don't get reviewed. Here's why ...

Panza Kick Boxing – US Gold/Futura – we've seen a French version, but as yet no English translation.

Colossus Chess X – CDS – Before our time mate!

Final Whistle – Anco – There were problems with our review copy, awaiting a replacement.

Multi-Player Soccer Manager – D&H Games – No review copy has been received as yet.

Three up!

Gremlin Graphics have their motor running, their recent motorsport racing games have all made it into the chart at one time: *Lotus Turbo Challenge*, *Toyota Celica Rally* and *Team Suzuki*. Seems high speed suicide is as popular as ever. Will *Supercars 2* make it four? Watch that dial – well chart page actually!

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Make a date!

Now you've read the preview copy of *Amiga Power*, FREE with this issue of *Amiga Format*, you'll have some idea of what's in store for you on Thursday April 25th. That's when issue one of the world's best Amiga games-only magazine makes its appearance. Don't miss out!

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GAME Busters

Hello, good evening and welcome to the latest instalment of everyone's favourite game show – **GAMEBUSTERS** (applause)! Now there are some lucky contestants who stand the chance of going away with some marvellous prizes tonight, so here's your host for the show, **MAFF EVANS** (dodgy jingle with applause).

WINNERS BOX

The players guide to *Captive* was compiled from a whole host of letters, so unfortunately there is no single prize for the senders. Sorry, but I have to be fair!

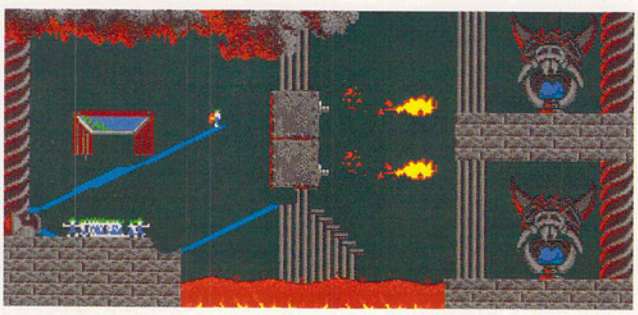
So without further ado, let's get on with the prize giving! Brian Doble gets a voucher for his *Horror Zombies* tips, Mrs. Osborne also wins for the extra *James Pond* hints and finally, that bloke with the weird signature that no-one can read! Whoever you are, your *Mean Streets* hints have won you a 50 quid voucher!

If you can do better, then send your maps, tips and cheats to:

GAMEBUSTERS, Amiga Format, 30 Monmouth Street, Bath BA1 2BW.

LEMMINGS

Lemmings has turned out to be one of those incredibly popular games for people to send in letters about. So here we have, courtesy of quite a large number of you, the complete list of codes for the levels of this highly entertaining puzzle game.



FUN LEVEL

01 – No code
02 – IJJLDNCCCN
03 – NJLDLCADCY
04 – HLLHCIOECU
05 – LDLCAJNFCK
06 – DLCIJNLGCT
07 – LCANLLDHC0
08 – CINNLDLICJ
09 – CEKHMDLJCO
10 – MJHMDLCKCW
11 – NHMLHCALCT
12 – JOLHCMOMCV
13 – MDLCAJLNCR
14 – ELCIJNMOCN
15 – LCENLMDPCL
16 – CINLMDLQCQ
17 – CAJHLFLBDT
18 – KJHNGLBCDQ
19 – NJNNHCCDDT
20 – HLFLCNNEDW
21 – LFLCCJLFDN
22 – NHCKKONGDQ
23 – LCCNMLFHDU
24 – CINLLGLIDL
25 – CCKHMGHJDM
26 – IJHOOHCKDM
27 – NKMFLCALDV
28 – HOOHCIOMDT
29 – OOHCGJLNDR
30 – GLCMJMMODT

TRICKY LEVEL

01 – HCGOLONPDX
02 – CMOLMGLQDJ
03 – CCJJLDMBEX
04 – IKHLDMCCEN
05 – OHNLIBADEP
06 – IDLMCIOEEU
07 – LDMCCJNFEP
08 – EMCIJMLGEW
09 – MCEOLLDHEW
10 – CMNLLEMIEP
11 – CEKKOLIJEK
12 – IKHMEMCKEX
13 – OJOLICCLEN
14 – HMDMCIOMEM
15 – MDMCGJMNEL
16 – LMBIJOOOEJ
17 – KCCOMMLPEU
18 – CKNLMDMQEV
19 – CCKHNNKBFR
20 – IJJLGMCCFS
21 – OHLFMCADFN
22 – ILFMCKOEFJ
23 – LFMCEJMFFT
24 – GICKKOLGFK
25 – MCGNMLFHFL
26 – BKOMNFIIFO
27 – CAJJMGMJFS
28 – KKKOOICKFV
29 – OHMFMCALFW
30 – HMGMCMOMFU

TAXING LEVEL

01 – MFMCGKLNFO
02 – GMCOKLMOFY
03 – MCANMMFPFO
04 – CINOMGMQFK
05 – GEKKNMJBGJ
06 – KJILDLGCGU
07 – NHNLJGCDGY
08 – ILDLGMOEGN
09 – LDLGCJOFGV
10 – ENGIJNLGGO
11 – LGANOLDHGJ
12 – GKNOLDLIGU
13 – GAJIMMHJGX
14 – OKHMDNGKGT
15 – OIMELGALGK
16 – HMDLGKOMGT
17 – MELGCKLNGN
18 – DLGIJOMOGV
19 – LGENMMDPGU
20 – GKNNOLHQGS
21 – GGKHNNHBHY
22 – KJJLFNGCHK
23 – NJLGNGADHW
24 – KNOHGOOEHL
25 – LFNGCJNFHJ
26 – GNGIJLLGHP
27 – HFANLLFHHU
28 – FINLLFHIHN
29 – FAJHMFHJHP
30 – IJHMFHFKHG

MAYHEM LEVEL

01 – NJMNLFELHX
02 – HMFJFINMHQ
03 – MFHFAJLNHX
04 – FHFIJLMOHQ
05 – HFANLMFPHN
06 – FINLMFHQHW
07 – FAJHLDIBIW
08 – IJHLDIFCIP
09 – NHLDIFADIN
10 – HLDIFINEIV
11 – LDIFAJLFIO
12 – DIFIJLLGIX
13 – MGCNNLEHIO
14 – FINLLDIIIN
15 – FAJHMDIJIP
16 – IJHMEMGKIO
17 – NHMDIFALIV
18 – HMDIFINMIO
19 – MDIFAJLNIX
20 – DIFIJLMOIQ
21 – IFANLMDPIN
22 – FINLMDIQIW
23 – FAJHLFIBJJ
24 – IJHLFIFCJS
25 – NHLFIFADJP
26 – HLFIFINEJY
27 – LFIFAJLFJR
28 – FIFIJLLGJK
29 – IFANLLFHKX
30 – FINLLFIIJQ

MEAN STREETS

More super-tough spy action abounds! All you Cyberpunk agents who are having trouble with this adventure, take heed and follow these tips.

To complete the adventure you must stop project OVERLORD. In order to do this you must collect eight pass cards from the scientists to which they were issued. Here is a list of where they live:
Here are the locations of the cards:

SCIENTISTS' HOMES	NAV CODES
Carl Linsky	4660/4663/4675
Cal Davis	3720
Sam Jones	0021
John Klaus	7012
Larry Hammond	4935
Ron Morgan	1998/6470/1710
Greg Cale	4753/8911/1700
Bosworth Clark	9932

You also need to know the passwords to the particular-coloured cards:

PASSWORD	COLOUR
Bishop	Blue
Rook	Black
Knight	Purple
Pawn	Green
Checkmate	Orange
King	Grey
Queen	Yellow
Stalemate	Red

CARD	NAV CODE	HIDING PLACE
Blue	4675	Inside Band-Aid can.
Orange	3720	In a box inside the cage.
Grey	5037	In the safe.
Red	6470	Piranha's Pool.
Green	7012	Johnny will give it to you (if you ask him).
Black	5194	In a locker.
Purple	8911	On the shelf near the vine.
Yellow	0021	Sammy will give it to you.

These people may have some useful information for you:

NAME	NAV CODE	DESCRIPTION
Bazil Mallory	2713	Attorney of Law and Order.
Tom Griffith	4590	Schimming's right-hand man.
Steve Clements	4680	The cop who is investigating Carl's death.
Jonny Fletcher	5170	PI who works for Linsky.
Ron Meat	4525	The weirdo who knows Larry Hammond.
Peter Dull	4674	Works at insurance company.
Bash Dagot	4657	Witnessed Linsky's death.
J St Gideon	3891	The man who is behind Project Overload.
Arnold Dveed	4610	Works for MTC Gideon's other project.
Frank Schimming	4650	Gideon's boss.
Jim Slade	4927	Killer who works for Knott.
Sandra Lawson	4599	Carl's girlfriend.
Sylvia Linsky	4421	Carl's daughter.
Wanda Peck	4621	Useful source of information.
Robert Knott	0132	Chief of Law and Order.
Smiley Monroe	3615	The cop who is investigating Cal Davis' death.
Aaron Sternwood	0439	Friend of Davis.
Delore Lightbody	4920	Carl's fiance.
Della Lang	2111	Loves Ron Morgan.
Lola Lovetoy	4603/4605	Worked for Gideon.

Here are some interesting locations that may be worth checking out:

LOCATION	NAV CODE
Bug Surf Hotel	6162
Law and Order HQ	5037
The University	4663

COMPLETING THE ADVENTURE

When you have collected all eight of the cards go to the main computer at the Gideon Complex (NAV code 4550). You will be captured when you arrive, but don't worry. When you are in a room with a furnace, get the mask from the panel and activate the furnace by remote control. A robot will enter the room to turn the furnace off again, at which point you should run through the door before it closes. You should now be in the main computer room.

The simple task (he says sarcastically) you now have to do is enter all the pass cards and passwords into the computer in just 1 minute. Once they have all been entered you can then relax because the world has been saved.

GENERAL HINTS

Keep a close track of who's who.
Don't threaten people if possible. It's better (and safer) to use bribery.
J St Gideon is the brain and Griffith is the brawn.
Big Jim Slade will be shot, so be quick with your questioning.
Robert Knott will be shot if you ask him about Gideon Enterprises.
The ape poses no problem with the pole from 8911.
Play the video tape from 4670 in the video recorder at 4605.
Vanessa and Lee Chin are really only useful for getting codes ... but we've given them to you already, so they're not important.
To get to a place press N to call up the NAV computer and N again to enter a co-ordinate. Now press A for autopilot and you will be taken straight there.

Illegible Name,
Newhaven, East Sussex

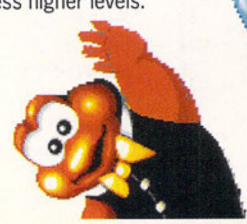
JAMES POND- UNDERWATER AGENT

Following on from the extensive set of tips in *AF* 20, here is another hint that a reader found just by accident.

Enter the cheat mode as normal (for those tuning in late to tonight's show, the code is JUNKYARD) and press the following keys to access higher levels.



Z – Level 3
X – Level 4
C – Level 5
V – Level 6
B – Level 7
N – Level 8
M – Level 9

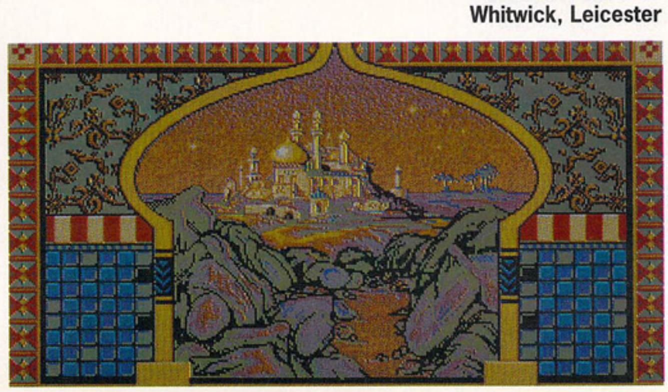


Mrs. DS Osborne,
Waterlooville, Hampshire

PRINCE OF PERSIA

Just a quickie ... If you want to jump levels, then hold down Caps Lock and press L. This won't work on the bottle bit at the end of Level 1. That's it, you can go on now.

Matthew Chambers,
Whitwick, Leicester



THE SPY WHO LOVED ME

Saving the world may be easy for a super-spy like James Bond, but for mere mortals it's a bit trickier. If you're having trouble then follow this simple advice.

Boot up the disk and start the game then stop the car and enter MISS MONEYPENNY. You will find yourself blessed with infinite lives and an endless supply of cash.

If you don't want to use the cheat for playing Level 2 however, then here is another tip. Try and buy the most expensive items in Q's armoured truck and make a note of the map on the left-hand side of the screen.

Douglas Galbraith,
Oundle, Peterborough

HORROR ZOMBIES FROM THE CRYPT

Quite a few people have been having trouble with the cheat mode for this ghoulish game, so here's something to make up for it ... yes, some more access codes! Gamebusters is nothing if not generous (quiet in the cheap seats!).

Level 1 – Just hit Return.
Level 2 – WOLFMAN
Level 3 – HAMMER
Level 4 – LUGOSI
Level 5 – NOSFERATU
Level 6 – GARLIC

If that's not enough creepiness for you, then try this – type in BOGEYMAN for infinite lives. That's BOGEYMAN, not BOGEYEATER as one person sent in!

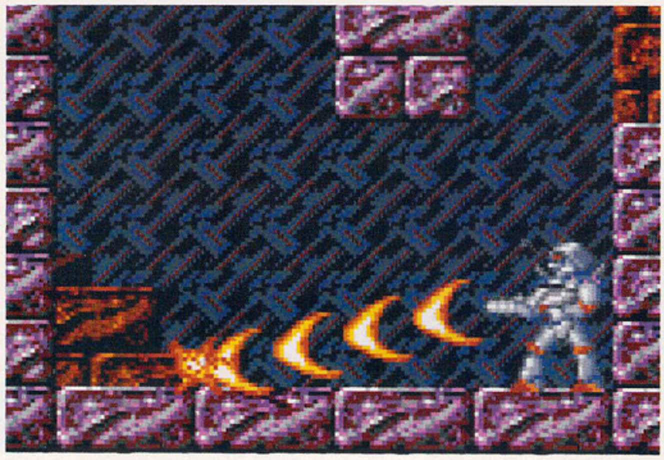
Brian Doble,
Cwmbran, Gwent

TURRICAN

Unfortunately, to use this cheat you have to be able to play well enough to get your score on to the score table. Once you have achieved this, enter your name as BLUESMOBIL (yes, without an E at the end).

When you next start the game you may be surprised to see that you now have 99 lives. Cor, strewth!

Andrew Johnson,
Middlesborough, Cleveland



HELPING HAND

Here's a brand new section for **GAMEBUSTERS,** where **MAFF EVANS** will try and answer some desperate pleas for hints on those ever-so-difficult games. Let's have a look at a few of our recent enquiries.

I have recently purchased a copy of *Robocop 2* and I am having great difficulty just getting past the first level. Please, please could you suggest any cheats for the game?

Stephen Enoch,
Formby, Liverpool

Well, the cheat was actually in the last issue, but for those of you who missed it, all you have to do is type in: SERIALINTERFACE on the title screen, then you can press F9 during the game to restore energy and press F10 to skip levels.

I've just recently bought a copy of *Warhead* and although I've managed to complete all the 'missions I've been given,' I can't seem to get past where the Bezerker destroys the Earth. A few tips would be very helpful.

MS Smith,
Wembley, Middlesex

Well, the main problem is that you haven't quite succeeded in dealing with the Bezerker on your previous two meetings. The first time you meet him should be on Mission 16, where you should throw all the weapons you have at him, making sure that they all hit home. Dodge all his missiles and jump back to Solbase when he says "Leave this space creature – before I eat you".'

While on Mission 17, you need to observe him in Tau Ceti/Protector space. Use Data Gathering Probes to get a drone squadron and vamoose when the Bezerker speaks. When he follows you fling your entire ordnance at him, making sure they strike home, then return to base when recalled.

The next time you meet him should now be in Pluto space on Mission 19, rather than Earth space. If he's reached Earth, then you haven't quite got it right – so try again!

If you want any more tips on this superb space game, then get your hands on the back issue of Amiga Format 19 which contains guides to all the levels.

I took your advice with the *Shadow of the Beast II* cheat mode (10 pints), but I can't get pass the dragon which says "Whisper the password". I have tried every word I can think of. Can you offer any suggestions?

Ben Wainwright,
Coventry

Well, without giving too much away, to get the password you must first get to Ishran and free the prisoner. He will then tell you the word you need to know.

Please, please could you help me to get past those damned monks in *Future Wars*, because every time I get onto the same screen as them they always put me into a deep sleep.

Damian Williams,
Bearsden, Glasgow

The monks shouldn't pose that much of a problem. Just remember that then you enter the room with the monks, always follow them around clockwise, then go to the west door and leave the room. It's as simple as that!

Lastly, we have a plea from Ian Dryden, who remembers a two-player, strategy war-game on the Dragon 32 called *Strategic Command*. If anyone knows of a similar game on the Amiga, write and let us know! To finish with, here's a note to all those people out there wanting more detailed hints and tips.

Kevin O'Flynn from Berkshire wants tips on *Castle Master*, Anton Roberts from Shropshire wants to help on *Corporation*, and Ian Wilson from Barnsley and Stuart Rumley from Tunbridge Wells want advice and maps on *Dungeon Master*. Well we don't really have enough space to cover such involved stuff here, but there is an alternative! All these games and many more have complete sets of maps and players guides in the *Screenplay* book – written by our own Maff Evans – the book is a comprehensive collection of tips, solutions and reviews for over 100 Amiga game classics. Check out the mail-order offer in these very pages for the answer to all your gaming problems.

Oh, speaking of the book, it seems that an error crept in on the *Dungeon Master* front. Level 5's map was repeated! Massive apologies to *Dungeon Master* fans, but we will be printing the map to Level 6 as soon as we possibly can!

If you have a query on beating a game, and even the Screenplay book can't help, then send them in to:
HELPING HAND, AMIGA FORMAT, 30 MONMOUTH STREET, BATH BA1 2BW.

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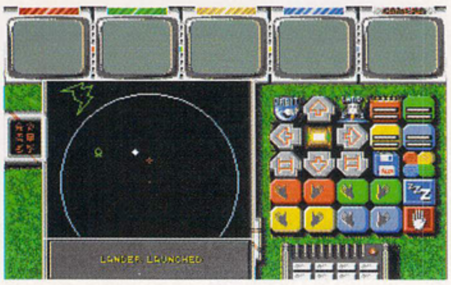
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CAPTIVE

All those gameplayers who are having trouble with the *Dungeon Master* lookalike, *Captive,* fear not! just read on for the definitive guide to getting to grips with this excellent game.

First off you need to fly your spaceship, the Swan, into orbit around the planet Butre (co-ordinates **008W-072N**). While your ship is winging its way through the cosmos, to its first destination, is a good time to assign the droid chips. Access the backpack of each droid in turn and you will see a silicon chip. Place this on the picture of the droids brain and type in a name for your droid, do this for all four. Your droids will now have their own characteristics and will have acquired the ability to punch, which is their first means of attack. Around about this time the good ship Swan will be in orbit around the planet Butre. Zoom-in on the planet and click on the little white dot. This is where your droids will land, click on the landing button and a hunting we shall go.

Once you have landed go for a little wander round to get used to the feel of the droids, but whatever you do don't enter the water because it is highly toxic and so it will damage your droids, and these babies are definitely not under guarantee.



To enter the base go up to the green door and look for the message from Ratt, this contains the correct sequence to open the door and as soon as it opens, step inside. In front of you should be some explosives and another message, pick these up and go to the back wall and use the push facility (click the right mouse button on the forward icon). The wall will move forward enabling you to move around the base properly.

HERE ARE A FEW TIPS ABOUT COMPLETING THE FIRST BASE

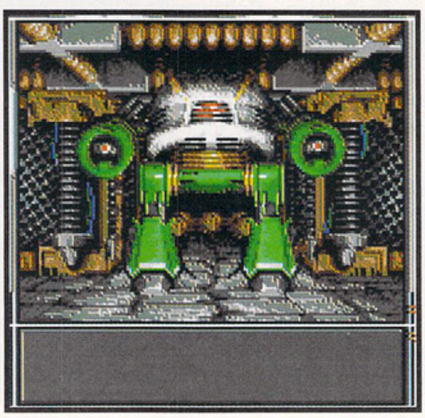
1. Explore the whole base by opening every cupboard and door – don't leave a corner unsearched, the map shown should help.

2. Pick up all the sacks of gold because after you destroy an enemy you are gonna need them. A good idea is to pick up and write all messages down so that you can sell them in the shops. Do the same for maps as most of them are pretty useless anyway.

3. Whilst romping around the depths of Captive your droids gain experience points. These can be traded in to raise your other attributes. To start with concentrate on increasing your brawling skills only. This turns you into a Mike Tyson of the droid world.

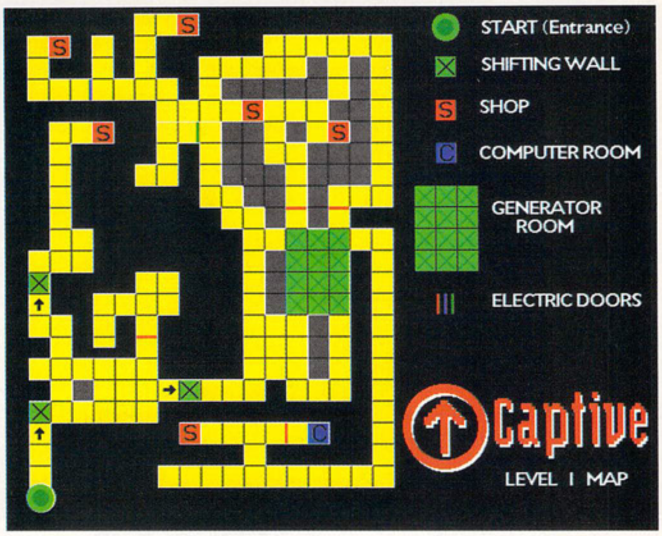
4. On the first base your going to need the use of Optics these are explained later.

5. To reveal the whereabouts of the next base you have to find the professor and kill him. You will then be given the password to enter the computer which will give you the planet probe; do not leave the base without one, otherwise you will not be able to find the next planet.



Once in possession of the planet probe you can go back and destroy the generators. To achieve this get the explosives and throw them at the top of the generators, then quickly put your running shoes on and peg it back to the green door, using the same combination as before, and then hop into your ship and take off. You can only leave when the generators have been destroyed and not before. Once you are back in orbit place the planet probe on the planet map to find the location of the next base.

During your quest you will need the help of some plug-in devices. They are divided into Optics and Dev-Scapes, here's what they do:



OPTICS

BASIC: An AG Scan which displays how much damage you are inflicting on your opponent during combat.

II: This is the route-finder. Essential for finding your way out of the base after you have destroyed the generators. It will also guide you the quickest way to the next base entrance when you land. Basically it always shows the quickest route out.

III: The Mapper gives you a map of the area you have covered. Shops are shown in red, while ladders and holes in green and doors in yellow.

IV: This is a radar, simple eh?

V: A Magna Scan guides you straight to the generators. Not much use at all really.

VI: The Body Scan. A nice, quick reference as to the condition of your droids.

VII: This is a vision corrector it allows you to see where false walls are, without it you would see a wall, with it a corridor.

SUPER: Visor. When you are exploring bases you will come across areas that are totally blacked out, the visor is infra-red and will enable you to see in the dark.

DEV-SCAPES

BASIC: Anti-Grav, an anti-gravity device enabling you to walk on the ceiling in flooded areas as well as find it easier to shoot floating enemies.

II: Shield, cuts down the amount of damage done to you by enemies.

II: Fire Shield, cuts down the amount of damage inflicted by fireballs.

IV:- Greaser, this speeds up the movement of your droids enabling you to run faster. Unfortunately it doesn't allow you to reload your weapons any faster which could have come in handy.

V: Power Sapper, this serves absolutely no purpose whatsoever and should be avoided like the plague, when activated it drains all the power from your droids chest.

VI: Fixer, this will fix any part of your droid that is not working (at 0%) and will restore it to some degree of working order. It does not, however, give a full repair.

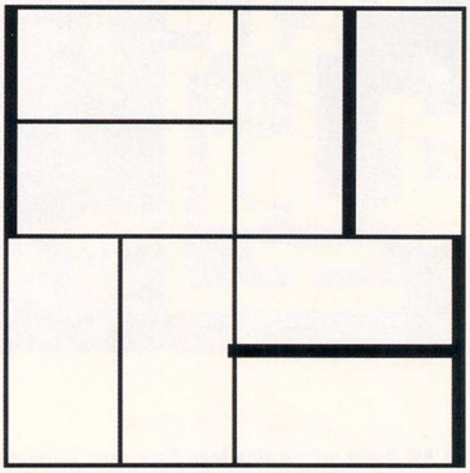
VII: Re-Charger, recharges the droid using if the power sockets are becoming a little scarce.

SUPER: Deflector, you will only need this on the later levels of Mission One. It will deflect any enemy fire. They drain very quickly and are very expensive so treat them with care.

Continued overleaf

Some items have a very short life, such as Dev-Scape Supers, if you pick them up you will see a power rating. It is far cheaper to carry a few of these items around with you and swap them over when they are running down low, and then get them repaired at a shop instead of just replacing them.

Dice seem to be a waste of space in your backpack, but they do have a use. When facing the circular bulkhead doors throw a die and it shows a four. One of the buttons will be red, this is the first button you must press, repeat this until you have the whole combination. You only need one die so don't go around collecting all you see, this will save space in your backpacks.



15099

There is a bug in most versions of the game that prevents you from finishing Planet Three, Mission Two (Phoopel). A clipboard is in the wrong area so you cannot get to it without opening the wall that it is supposed to open. The clipboard is the type where lines are highlighted on a grid and is number 15099. The clipboard should be as follows.

GENERAL TIPS

Save regularly so that if you are taking a bit of a licking you can always reload, saving time, money and hassle.
Do not stand and fight, always retreat backwards into a corner and fire long-range shots minimising risk to you party. In later levels it only takes one hit to critically injure your party.
Remember to increase your skills. This is very important as skills are easily gained on the first levels. Put your leader at the back, this will reduce the risk of having his head knocked off.

Are you tired of being poor? Well Mr George Barclay certainly is, and he has found a way of clocking up 18,666 credits. When you land go and pick up the message from Ratt, on Butre, then return to the Swan, and then land again.

There will be another message from Ratt, pick that up as well. Repeat this process 88 times and put all the messages in the backpacks



and when these are full carry them in the hands and one on the cursor. Then enter into the base and find a shop. You can then sell the messages and get all that money. Simple when you know how.

After these planets the clipboards become few and far between and are replaced by graphic combinations and numbers.

LISTED BELOW IN ORDER ARE THE COMBINATIONS FOR THE BASES ON MISSION TWO.

Masgot: ....**TR,BL,TL,BR.**
Traphet: ....**TL,BL,TR,BR.**
Phoopel: ....**TL,TR,BL,BR.**
Sodcket:..................................**BL,BR,TL,TR.**
Zaitet: ....**TL,BR,TR,BL.**
Quelosod:..................................**TL,TR,BL,BR.**
Saldet:..................................**BL,TL,TR,BR.**
Mieusia:..................................**TL,BLL,TR,BR.**
Pasdet:..................................**TL,TR,BL,BR.**
Leatod:..................................**BR,TR,TL,BL.**



CLIPBOARDS

Below are a list of passwords for the computer-operated beam doors on each planet in the first mission. The ones in capital letters are the codes for the computer to get your next planet probe.

Also, listed below, are the combinations to enter each of the bases. The combination definitions are the following: **TR = top right, BR = bottom right, TL= top left and BL = bottom left.**

PLANETS	CODES	COMBINATION
Butre:	CHAESELUME.	TR,BR,TL,BL.
Pelphi:	RUPPESICBERY.	BR,BL,TL,TR.
Meestre:	PHYDERLAPS,EXSOMIDED, scoofar, ruppekal, eginham.	TL,TR,BL,BR.
Triekos:	ELSISYDON, RATSICPOCY, pocinsbee, elders, yulthaape,viginink,chaltedon.	TR,BR,BL,TL.
Salstee:	SYTHALEBEE, MIDINSNEING, lapcepy, phydered, exsosy.	TR,BR,BL,TL,
Seavy:	YULESDEAPE, POCCEPLAPS, epeton, sylekal, rupsoham.	BR,TL,BL,TR.
Sodpia:	EXTHAFAR, SCOSINSINK,vipeape, pocginkal, yulooham, ratsics,chasbee,elsidon.	TR,BL,TL,BR.
Quoonel:	QUESOSIFAR, LAPLELEBEE,syinsink, lapdering yulenebery, midesdon, physiy, queltes, exneed.	TR,BR,TL,BL.
Phuphet:	VISICEXTON, CHAENEDEAPE,sythafar, midinsham, rupneton.	BL,TR,BR,TL.
Budod:	EINSTHASY, RUPGINENEHAM,yulcepton, chaleape, elsicbee,pocpefar, deesdon, ratinsink, visokal.	TR,BRBL,TL.

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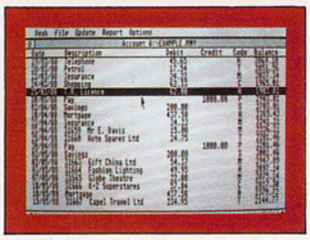
Amiga Version by Dan Lennard.

Here's what the critics say:

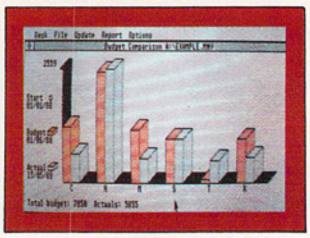
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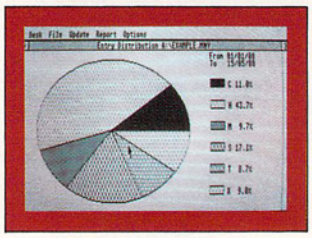
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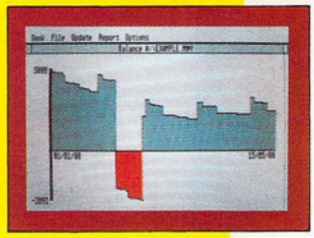
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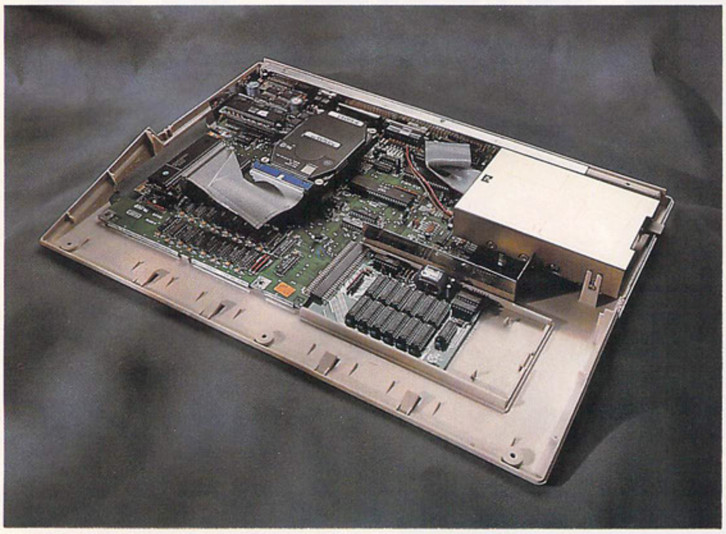
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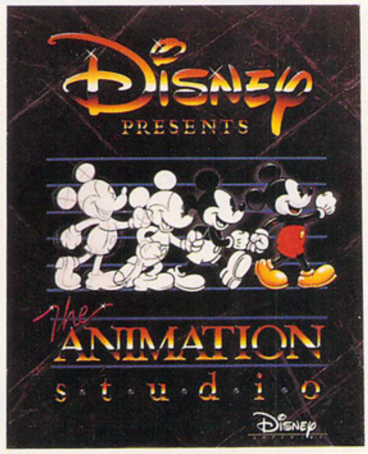
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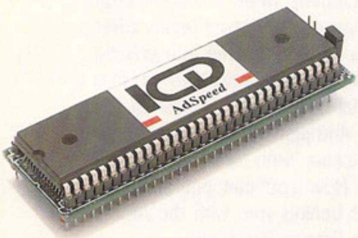


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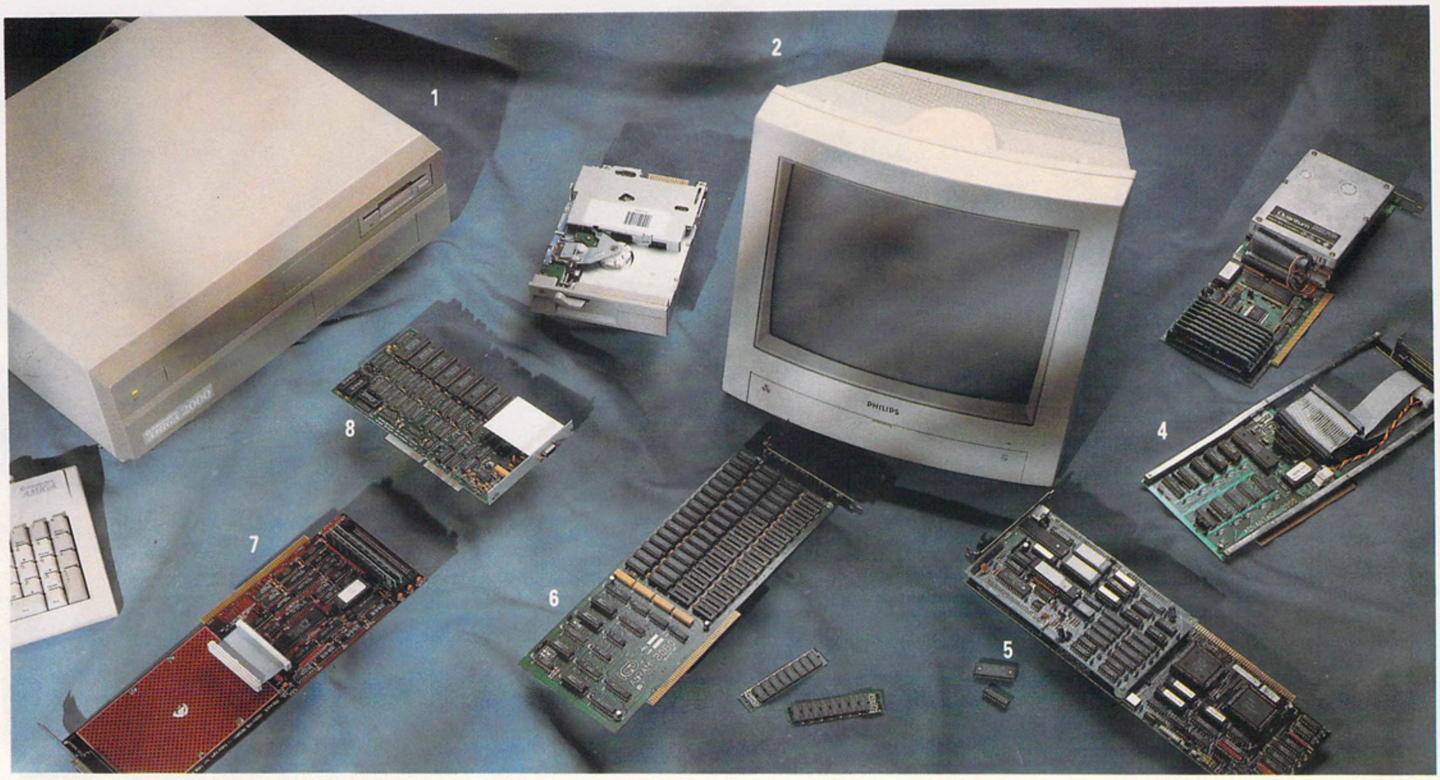
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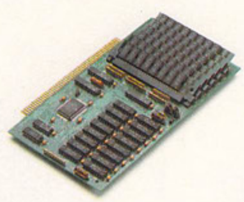
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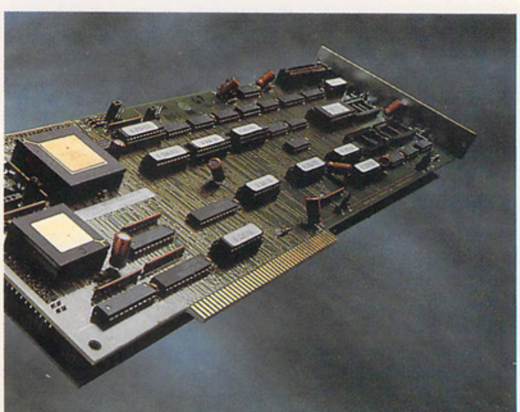


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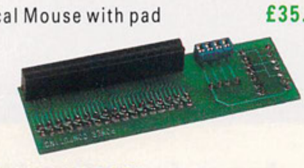
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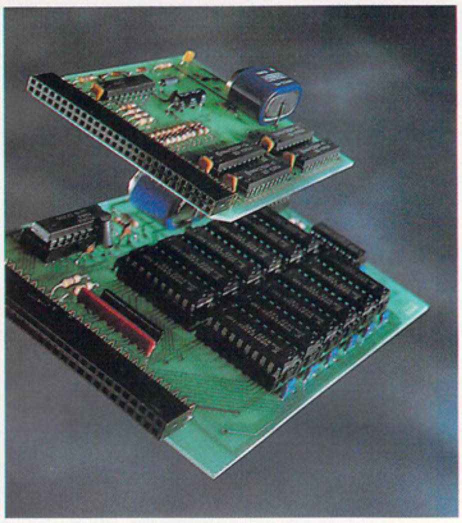
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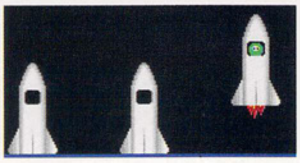
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Down with Skool



Educational software on the Amiga is proving to be as popular with kids as some of the best leisure games. **PAT WINSTANLEY** plays teacher, with a quota of children, and views and reviews the current 'skool' scene.



FUN SCHOOL 3

(FOR THREE AGE GROUPS)
DATABASE
0625-878888

£24.99 EACH

VERDICT:★ ★ ★ ★

The *Fun School* series is the first set of educational programs to successfully bridge the gap between playing and learning – reflected in *Fun School 2* which reached the charts alongside the most successful shoot-em-ups. *Fun School 3* might yet do the same.

Each package contains six different games designed to cover a broad spectrum of National Curriculum requirements suitable for a particular age group. Those for pre-school children concentrate on initial familiarity with colours, shapes, words, letters and numbers, while those for the highest age group include a database and a Logo drawing program.

After testing all three packages on children, of a variety of ages, I found a good deal of overlap between groups, not only in the abilities required for particular levels, but also in the children's enjoyment of games in other groups.

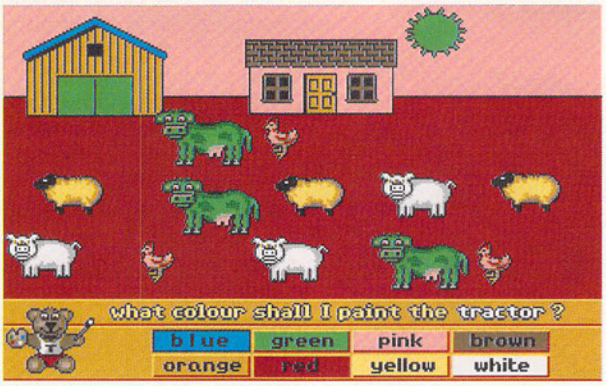
The oldest children tested were first-year seniors. Since both of them found the Over Sevens package quite a challenge at medium levels, I imagine many children right up to GCSE standard would both benefit and enjoy the package. At the other end of the scale, children as young as three are quite capable of coping with some of the Under Five's games (occasionally with adult help).

Both late infant and early junior children tested the fives to sevens pack, their ages reflecting accurately the levels of attainment reached. Some of the older (top junior/early senior) children also found plenty of challenge in this set of games.

All three packages boast clear and colourful graphics with simple yet effective animation. Sound effects are sparse but apt and control is very simple allowing the youngest children to work with little intervention. Below is a resume of the games in each package, all of which were highly appreciated – not a duff among them.

UNDER 5

Counting shows a teddy bears' picnic and asks the child to count various items and type the answer. For younger children an adult might need to do the typing after the child shouts the answer. *Letters* shows a fairground scene, where a letter (either upper or lower case) has to be matched with part or all of the alphabet. *Matching* is concerned with shapes and colours where the child selects matching pictures to progress. In *Actions* clicking on a word makes teddy jump, skip, juggle before your very eyes. *Gallery* has the child matching a caption to a picture such as a teapot or a teddy. *Painting* allows a farmyard scene to be coloured in the most bizarre fashion the child can imagine.





ABOVE TOP: The under-fives get the chance to colour the farmyard in bizarre, lurid ways. A pink tractor might be chic...

ABOVE: Finding your way around town for the five-to-sevens.

BELOW: Older children enjoy maths in an arcade game style.



FIVE TO SEVEN

Toyshop gives a child practice in pocket-money economy by making the child select differently priced goods. *Time* is a simple clock tutor covering half and quarter hours. *Collect* covers simple arithmetic and is quite challenging at higher levels – guide the frog to the correct number to complete the sum. *Electricity* concerns itself with the idea of circuits, conductors, insulators and other components. *Journey* introduces Logo principles with forward, backward and left and right swivel movements around a simple village. *Funtext* is a simple database illustrating the principles of information retrieval.

OVER SEVEN

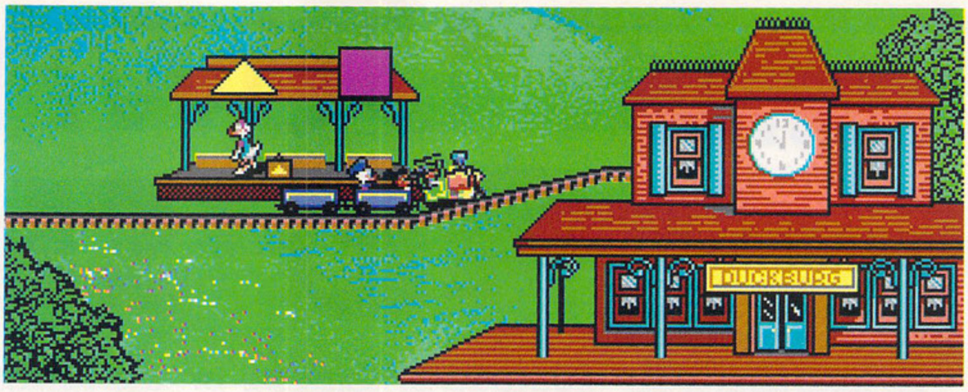
Treasure Search extends the Logo principle to compass directions and distances practising comparisons with unit distances. *Word Search* involves identifying words running different ways in a scrambled grid. *Robot Draw* is a standard Logo drawing program with several examples to get the child going. *Planetary Maths* had everyone hooked as it was the closest game to an arcade style – adults beware as it's not easy! *Sentences* gives the child a chance to practice finding mistakes in spelling and punctuation and proved very popular. *Database* is simply that, a basic database which expands on *Funtext* in the previous package allowing creation as well as retrieval techniques to be mastered.

Continued overleaf▸

DISNEY SOFTWARE

ENTERTAINMENT INTERNATIONAL
0268-541212

£24.99 EACH



GOOFY'S RAILWAY EXPRESS
VERDICT: ★ ★ ★ ★

Even the youngest children love cartoons and quickly learn to identify various Disney characters. This game is aimed at two to five year olds and is effectively a rolling cartoon with which the child can interact at any level of ability.

Goofy's train travels around several screens of countryside puffing smoke from its funnel as it goes. Various coloured shapes, along with the smoke are puffed out too. The only game control is the space-bar which when pressed will transform the puffed out item into a feature of the landscape related to its original colour and shape. Thus a triangle might become a tent while a semi-circle could transform into a turtle.

It is also possible for Goofy to pick up his friends from the station and take them for a ride. This is achieved by matching a puffed-out shape to one held by the passenger waiting on the platform.

At the simplest level a child can simply watch the rolling display, perhaps with an adult commenting on the names of different shapes and colours, but if you don't mind sticky fingers on the keyboard try letting the baby or toddler have a go at changing the shapes.

MICKEY'S RUNAWAY ZOO
VERDICT:★ ★ ★ ★

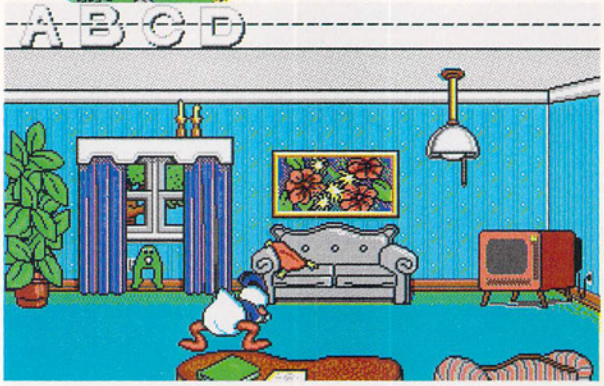
Goofy again! This time he has let all the animals escape from the zoo, so he and Mickey must collect them all up again. The game consists of several scenes where animals are hiding, a number corresponding to each hiding place. The child's task is to find the number on the keyboard to flush the animal out. As a number is pressed, that quantity of escapees perform a task such as carrying pies to the collecting cage.

ABOVE: Under bridges, over bridges, to its destination: Goofy's crazy train is an easy way for younger children to learn shape recognition skills.

BELOW: Finding the animals with Mickey Mouse, you also find out about numbers.

BOTTOM: And hunting letters with Donald teaches the alphabet.





Aimed at children aged two to five the game is intended to familiarise youngsters with the appearance of various number shapes and also give them an appreciation of the quantities referred to by those shapes. This is very much a game of observation, the only puzzle element being the task of finding all the numbers in each scene and their counterparts on the keyboard.

Each of the cartoon-style screens is packed with detail to be discussed with the child, though no adult intervention is required after the initial setting up. There are no time constraints and no 'wrong' answers so children can simply enjoy controlling the action without frustration creeping in. They won't even realise they are learning. An excellent game.

DONALD'S ALPHABET CHASE
VERDICT:★ ★ ★ ★

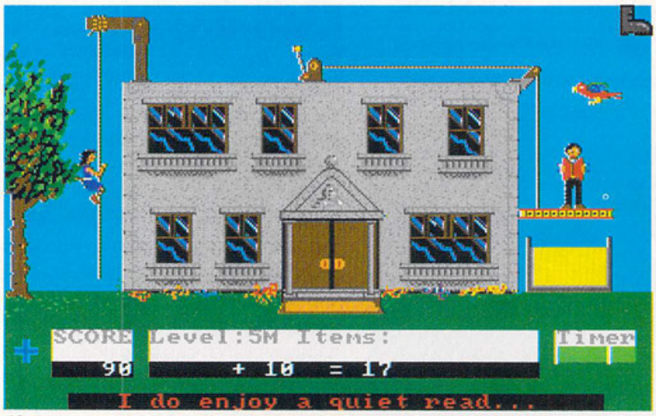
Poor Donald! His house has been invaded by an army of magic letters which are now swarming everywhere. Disguising themselves as fixtures and fittings they lurk in the corners waiting for Donald to catch them. The child (again two to five) has to help Donald by watching for each letter and pressing the corresponding key.

The letters are presented in alphabetical order in small batches, a few at a time shown at the top of each screen. When a letter flashes on the upper screen its disguised partner appears in the room setting Donald off in pursuit. The animated letters are hilarious to watch (the letter 'D' sticks its tongue out at Donald behind his back) and Donald's actions in trying to catch them are a treat. When a letter is caught he throws it into its place in the upper screen.

One drawback of the game is that letters are all upper case while most children learn lower case when they start school. However, since letters are shown in upper case on the keyboard this might not be a bad thing. It's a fun way to familiarise children with the keyboard layout.

Continued on Page 123

HOORAY FOR HENRIETTA £24.99
SCETLANDER 041-357-1659 **VERDICT:★ ★ ★**



If John's wedding is to go ahead, he's going to need a little bit of help from the kids in an enjoyable game-like fashion.

John the Parrot has stolen hopeless Henry's wedding clothes on the eve of HIS big day (the parrot must be a sadist, a confirmed bachelor or in league with Henry) so Henrietta sets out to retrieve her helpless groom's raiments. Apparently she's not too good at maths, though, and that's where you come in. By answering questions you help Henrietta's progress around four different screens – fail and the parrot will drench Henry with custard.

Scetlander suggest that products like Henrietta are games with an educational content rather than educational games. The kids played this like an arcade adventure, the puzzle solving being essential to progress yet simply something to be tackled in order to see the next screen.

With eight levels of difficulty (and addition, subtraction, multiplication and division all having to be tackled) the program is billed suitable for ages five to 12. However under-eights may need help, even on Level 1, and Level 8 takes you into the realms of serious mental arithmetic.

Why are children fascinated by seeing people splattered with gunge? My kids were hysterical with laughter when Henrietta failed and Henry succumbed to the parrot's sadistic tendencies. Highly recommended.

LEARN TO READ WITH PROF

PRISMA SOFTWARE
0244-326244

£24.99 EACH

Some issues back *Amiga Format* looked briefly at the first of this series of four parts. Now parts *2* and *3* are available with part *4* due to be released soon.

The series is a reading scheme which progresses in stages from non-reader to the ability to read and understand the spellings of 63 standard early words. Any of the parts may be used independently which allows children of various reading abilities to enter the series at the appropriate level.

Overall the children found the series rather tedious due to repetition of words and actions. Another niggle was the control system which everyone found slow and sluggish even on fast setting. While animation is fun initially constant repetition (again) slowed the pace down and distracted the children. Their concentration tended to wander while waiting for the program to finish congratulating them and getting on to the next task. The only person who made it to a full congratulation screen without giving up was me and to be honest it didn't seem worth it.

Having said that, the tester children (although infant age) are all fairly computer literate and used to much more complex control systems on the Amiga. Perhaps they are simply jaded and absolute novices with nothing to base comparisons on would find the system more acceptable.

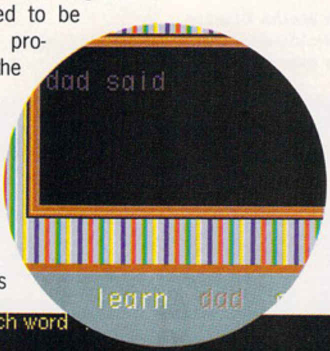
As a series the packages are well integrated and likely to work best with problem readers who need novelty, constant reinforcement and practice. But for many children I feel interest will be short lived unless the programs are made more user-friendly.



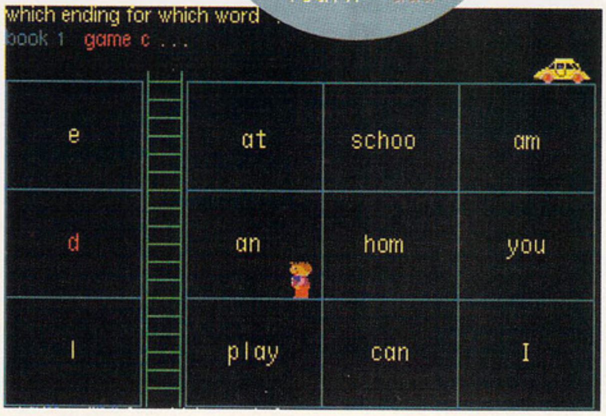
The Learn to Read with Prof series now comprises three – and soon a fourth – integrated reading tutors. They also come with reading books and a tape on which a story is read out by the well-known actress Patricia Hayes.

PROF PLAYS A NEW GAME
VERDICT:★ ★ ★

Part One contains the extras which set the scene and provide support material for the rest of the series. An audio cassette and story disk are run together, the cassette narrating a story about learning to read and giving instructions on keyboard use. Additionally five small reading books are included, graded to be used as the child progresses through the word list.



The game (now with speech) involves the child manipulating a rather little man around the screen using the arrow keys and matching words from one side to the other. As a word is selected the computer speaks the word and the child must then send the man to the same word elsewhere. The speech is not repeated as the child is encouraged to name the word on finding the right match.



Each of the five levels has a book which contains the words learned on that level and once each book has been completely mastered the next level is attempted.

PROF LOOKS AT WORDS
VERDICT:★ ★ ★

This one is based on the same word list as part one, this program has an identical layout on screen but concentrates on spelling.

Instead of matching words the child practises adding beginnings and endings to words. Also covered are double letters such as 'oo' and 'tt' and vowel combinations. This part has no speech facility.

While Part One really concentrates on the non-reader, this part is much more suitable for those who already have a modicum of skill and is useful to show or reinforce the way in which to show children how sounds make up familiar words.

PROF MAKES SENTENCES
VERDICT:★ ★

A new screen layout graces the monitor this part, probably a welcome change for the children, depicting a classroom with a blackboard.

Two games are available in this part, one concentrating on filling in the missing word of a sentence, the other involving creating a sentence from given words.

In each game you have the option of typing an answer or selecting it with the both arrow keys and space-bar. Once again the levels are graded in accordance with the books in part one, thus covering the same basic vocabulary.

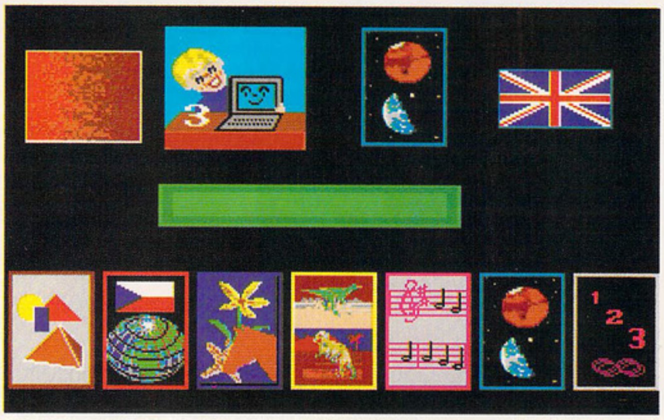
MATCH PAIRS £19.99
ELECTRONIC ARTS 0753-49442 VERDICT:★ ★

***Match Pairs* is based on the card-game *Memory* – where pairs must be found; a pretty uninspiring task usually, but this game has lots of extras which lift it above more standard offerings. By utilising the speech abilities of the Amiga the game adds general knowledge tutoring to memory and observation practice.**

As each card is turned over the computer speaks out about either the name of the item depicted or a fact about it. As a further bonus speech can be selected as French, Italian or German as well as English, although the computer voice isn't too clear – probably not clear enough to actually learn vocabulary from scratch.

Various options are available such as two player, against oneself and different standards of computer opponent. The hardest computer opponent never forgets a card once turned over – formidable. Cards on screen can be 20, 30 or 42 and subject matter is selected from seven different categories each of which has a variety of sub-topics.

Categories include shapes, numbers, flags, natural history, dinosaurs, musical notes and tunes, planets and terms of the universe. The selection of cards in each category is large enough to avoid boredom at first but the game still becomes rather tedious after a while.



The basic idea behind this pair-matching game is not an original one, even when you consider the limited environment of Amiga educational games. For another instance, see *Uncle D's Con-Sound-Tration* in our round-up of educational games in *Amiga Format*.

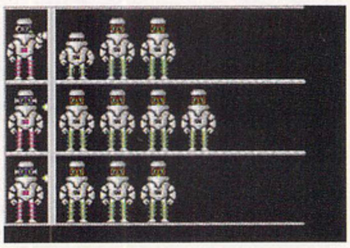
Round-up Education

With the release of AMOS many educational games that were originally programmed in STOS are now being converted to the Amiga. Among the software houses making their games available on the Amiga is Soft Stuff (0732 351234) whose *Puzzle Books* (1 and 2) are now available. Rather like the *Fun School* series reviewed here, *Puzzle Books* each contain a selection of games covering different aspects of education and at £19.95 for each pack of half-a-dozen games it's well worth a look. Due to the in-built difficulty levels the games suit virtually everyone from four to 90.

Not quite out at the time of going to press but sounding good is *Spell!* from Database (0625 878888) which at only £8.95 includes five different tests. Among the sections are anagrams, hangman and flash cards, and with 5000 words provided and the facility to add your own lists the pack must be well worth a look.

For those of you with money to burn ABLAC (0626 332233) are distributing the only Davidson package currently available for the Amiga. *Maths Blaster Plus* has the typically American price of £39.95, is aimed at six to 12 year olds and is a slick maths tutor. Although the quality is excellent with many options available, I can't help feeling the price is rather over the top with so many good maths packs around at half the price.

Following on the heels of the Disney games reviewed earlier is a program aimed at five to 8 year olds which sounds like good fun. *Mickey's Crossword Puzzle Maker* uses cartoon graphics combined with words to create, play and print crosswords. Expected release date is around May '91 at £24.99. Check with Entertainment International (0268 541212) for further details.



RIGHT: A first glimpse of the Puzzle Books series from Soft Stuff.



RIGHT: A formula which is extremely popular in schools, *Maths Dragon* takes up an adventure style and uses it to teach.



BELOW: *Maths Blaster* is a slickly-designed and very gamesy tutor.

For something a little different how about an adventure? With *Maths Dragon,* Coombe Valley Software (0626 779695) have taken the standard text-graphic adventure format and woven several children's adventures based around maths and logic problems. All the games feature simple English which encourages reading and spelling skills in addition to keyboard practice and direction finding techniques. Only available on the ST as yet but conversions to Amiga should be well under way by the time you read this. Well worth checking out – the kids love them!

Also with an adventure format is *The Three Bears* from School Software (010353 6149477) which is aimed at youngsters between five and 10 and aims to develop reading skills and imaginative thought. Loosely based on the fairytale it is available for £22.95. As educational software specialists this company has a wide range of packages for all ages.

For a detailed list of most of the Amiga educational software currently available contact Rickett Educational Media (0460-57152) who publish two detailed catalogues (primary and comprehensive) together with a summary (Parent Guide). Although many programs are available only on BBC etc, they have a respectable list of Amiga titles too and distribute titles from most of the smaller software houses as well as the big boys. ■

AMIGA FORMAT'S GUIDE TO EDUCATIONAL SOFTWARE

A brief look back at educational software reviewed in Amiga Format Issues 12 and 14.

My Paint ★★★★★
PRISM £34.95



Excellent first paint program, allowing colouring in for the less skillful as well as a range of drawing tools in 12 colours and sound effects.

The Talking Animator ★★★
JMH SOFTWARE £34.95
Fun with simple animations, accompanied by digitised speech that you type in. A bit limited, but it gives a good starting point.

At the Zoo ★★★
MERIT SOFTWARE £24.95
Enjoyable colouring program that takes a day at the zoo as its theme. It's colourful and fun, but it is only a colouring book. Very simple.

Designasaurus ★★★★
DESIGNWARE £34.95
Explores the enduringly popular 'thunder lizards' with good scientific background on habitat and physical make-up. Mixes facts and fun.

Uncle D's Con-Sound-Tration ★★★
ALOHAFONTS £19.95
Well-presented and enjoyable memory game that asks you to remember and match hidden pairs of tiles. Good use of sound and pictures.

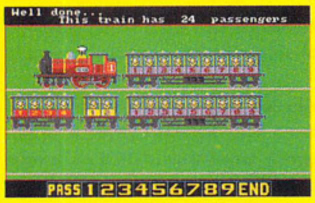
World Atlas ★★
CENTAUR SOFTWARE £34.95
For older children, an interactive atlas. lots of good information about countries and international organisation, but too American-centred.

Things to do With Numbers ★★
SOFT STUFF £19.95
Slightly less enjoyable collection of teaching tools covering telling the time, adding sets of numbers and a puzzle game. Less well-directed than *Things to do With Words* (below).

The Talking Storybook ★
DESIGNING MINDS £19.95
Storybook read by American robot. One case where a computer makes it less interactive than the real thing. Nice pictures, but stick to 'real books'.

Answer Back Quizzes ★★★
KOSMOS £19.95
Popular not-so-trivial pursuit combining learning through multiple-choice questions with games as reward. Quite jolly, in Senior and Junior versions.

Things to do With Words ★★★★
SOFT STUFF £19.95



Nice collection of word games, including anagrams, sentence construction and making as many words as possible out of given letters.

Math-a-Magician ★★
THE OTHER GUYS £22.95
Maths practice with a sums game: reward system based on encouraging sampled comments. Little bit dull though.

Let's Spell... Series ★★★
SOFT STUFF £19.95



Nicely presented but slightly unimaginative spelling books, available in various locations (At Home, At the Shops etc) to teach common vocabulary.

SUPPLIERS
Many of the educational programs above are available from ESP Educational Software of Southend-on-Sea (0702 600557). Other useful numbers are Kosmos in Dunstable (0525 3942) and Soft Stuff of Tonbridge, Kent (0732 351234).

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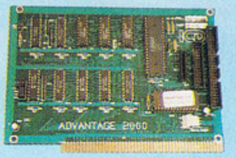
Faster Than any other Competitor "Amiga Computing"

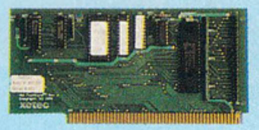
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Xetec 85MB 25 Milli Head Park	£599.99	Xetec 2MB	£249.99
Xetec 106MB 15 Milli Head Park	£649.99	Xetec 4MB	£349.99
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Amiga Floppy Drives

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external 84 track slimline drive with cable & switch

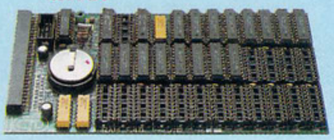


External Floppy £69.99



No case mods
Internal Floppy £59.99

Ram Expansions



ICD AdRAM A500

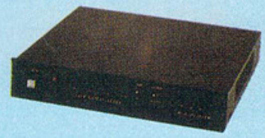
ICD AdRAM for the A500 offers memory expansion from 512K to 1MB then by adding 4 chips it expands to 1.5MB etc. The board comes supplied with comprehensive manual and clock. It takes only minutes to install & requires no soldering. Available in any configuration. Plugs in A501 expansion slot.

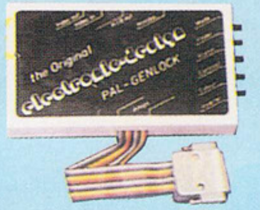
AdRAM 540 unpopulated	£79.99	AdRAM 540 with 2MB	£169.99
AdRAM 540 with 1/2MB	£99.99	AdRAM 540 with 4MB	£244.99
AdRAM 540 with 1MB	£134.99	AdRAM 540 with 6MB	£484.99
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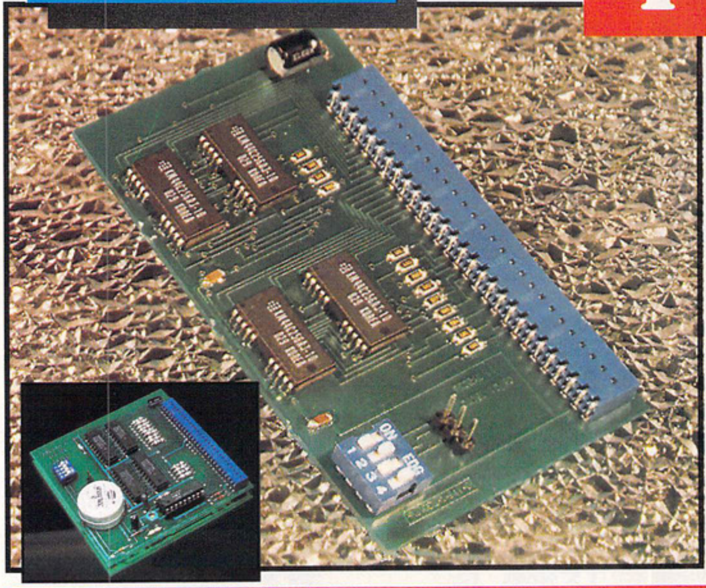
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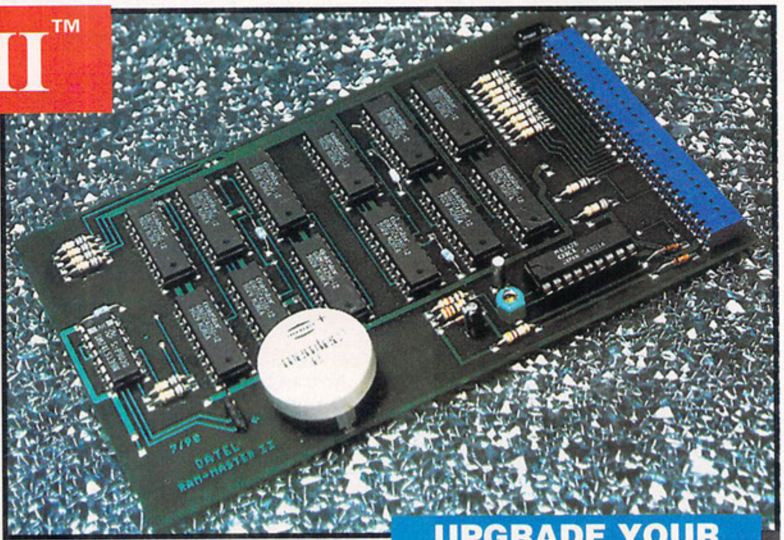
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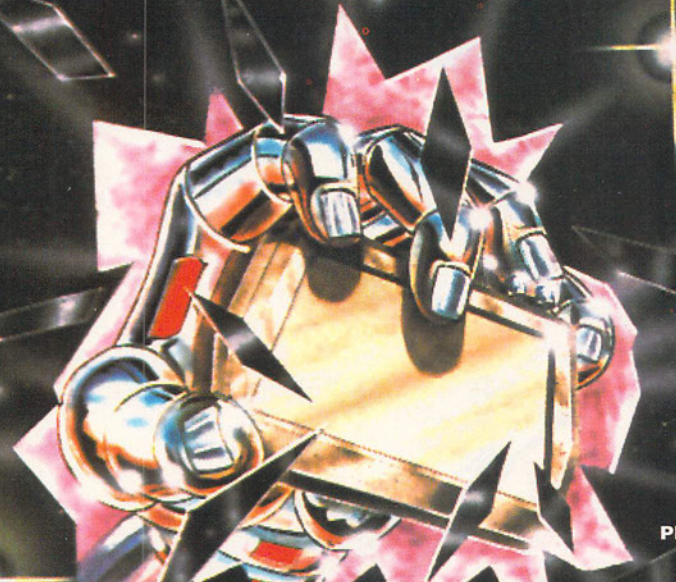
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- **SAVE PICTURES AND MUSIC TO DISK**
Pictures and sound samples can be saved to disk. Files are saved directly IFF format suitable for use with all the major graphic and music packages. Samples are displayed as screen waveform.
- **SLOW MOTION MODE**
Now you can slow down the action to your own pace. Easily adjustable from full speed to 20% speed. Ideal to help you through the tricky parts!
- **RESTART THE PROGRAM**
Simply press a key and the program will continue where you left off.
- **FULL STATUS REPORTING**
At the press of a key now you can view the Machine Status, including Fast Ram, Chip Ram, RamDisk, Drive Status, etc.
- **POWERFUL PICTURE EDITOR**
Now you can manipulate and search for screens throughout memory. Over 50 commands to edit the picture plus unique on screen status "overlay" shows all the information you could ever need to work on screens. No other product comes close to offering such dynamic screen handling of frozen programs!!
- **MUSIC SOUND TRACKER**
With Sound Tracker you can find the complete music in programs , demos,etc. and save them to disk. Saves in format suitable for most track player programs. Works with loads of programs!!
- **AUTOFIRE MANAGER**
From the Action Replay II preference screen you can now set up autofire from 0 to 100%. Just imagine continuous fire power? Joystick 1 and 2 are set separately for that extra advantage!
- **DISKCODER**
With the new "Diskcoder" option you can now 'tag' your disks with a unique code that will prevent the disk from being loaded by anyone else. 'Tagged" disks will only reload when you enter the code. Very useful for security.
- **PREFERENCES**
Action Replay II now has screen colour preferences with menu setup. Customise your screens to suit your taste. Very simple to use.
- **DISK MONITOR**
Invaluable disk monitor - displays disk information in easy to understand format. Full modify/save options.
- **DOS COMMANDS**
Now you have a selection of DOS commands available at all times - DIR, FORMAT, COPY, DEVICE, etc.
- **DISK COPY**
Disk Copy at the press of a button - faster than Dos Copy. No need to load Workbench - available at all times.
- **BOOT SELECTOR**
Either DF0 or DF1 can be selected as the boot drive when working with Amiga Dos disks. Very useful to be able to boot from your external drive.

PLUS A MACHINE CODE FREEZER MONITOR WITH EVEN MORE POWER!!

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REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE WITH ALL MEMORY AND REGISTERS INTACT -
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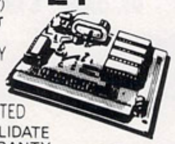
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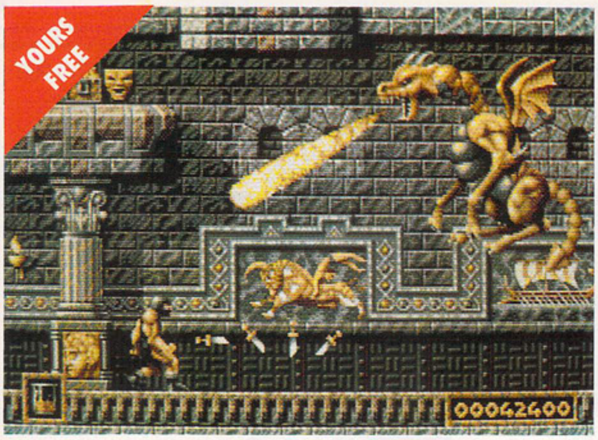
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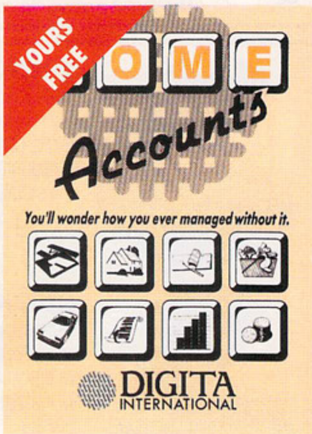
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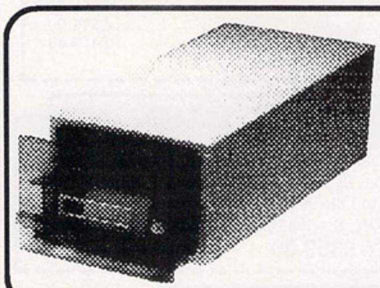
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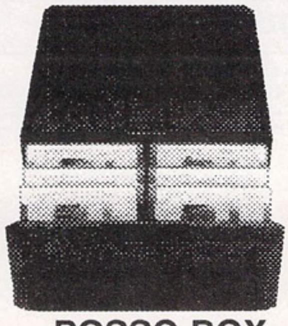
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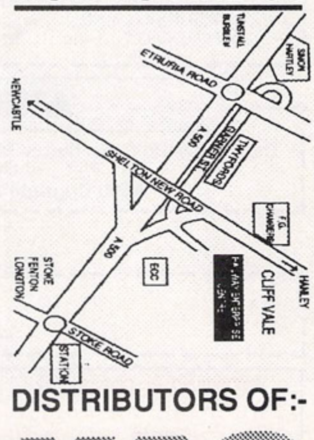
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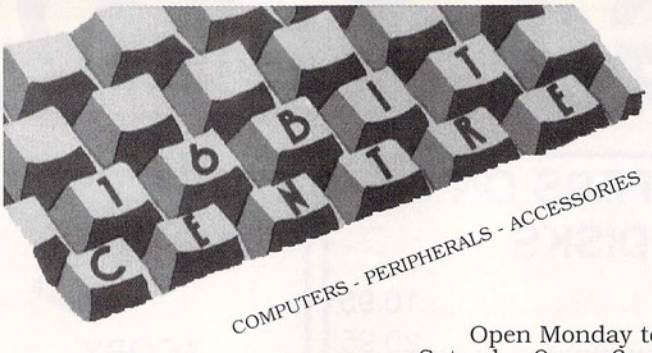
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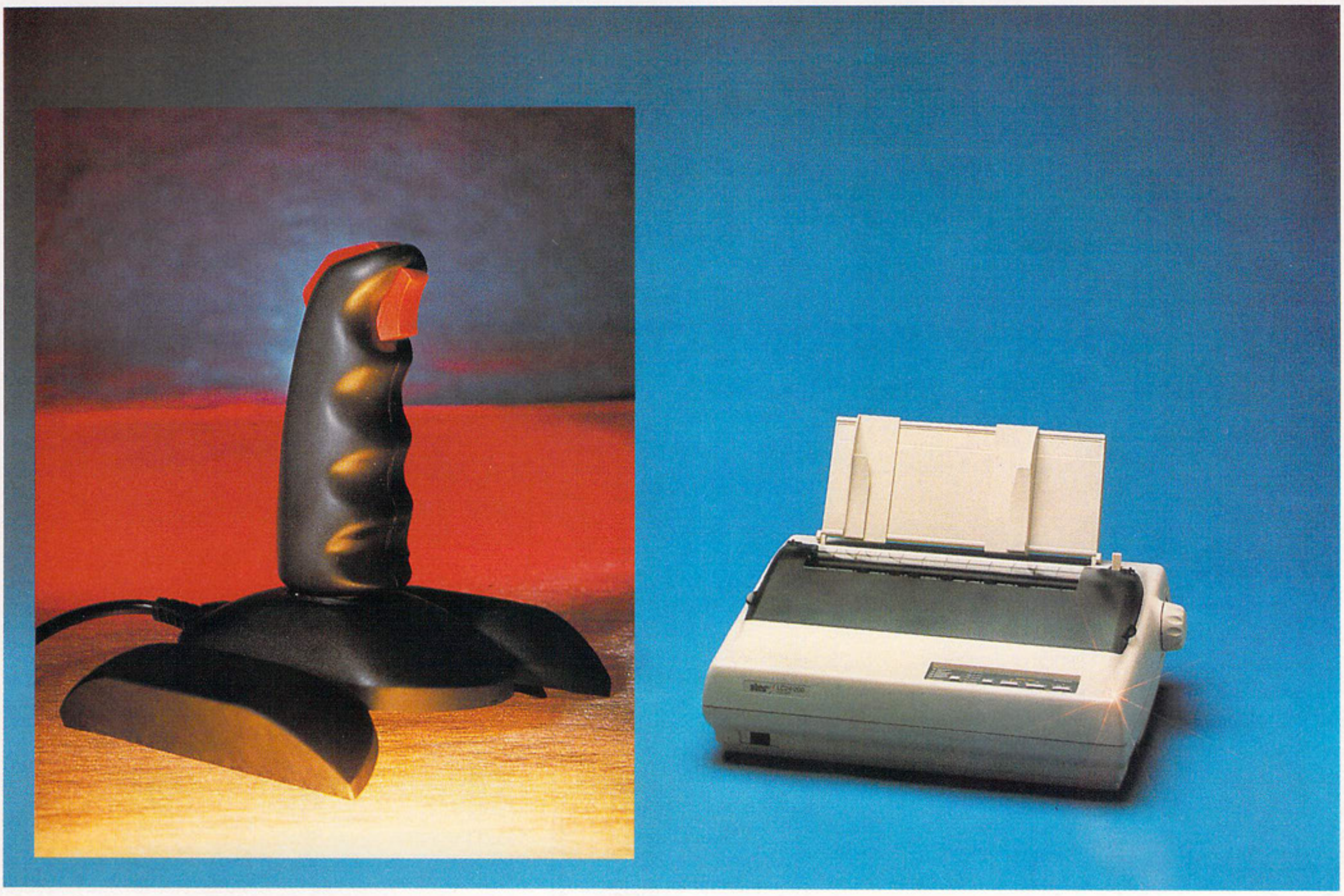
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A Krackin Kompetishun!

Win a brand new 24-pin dot matrix colour printer or your share of £1000 worth of goodies including 50 new Converta joysticks.



The Converta is a bizarre new concept in joysticks, featuring a switching system in the handle that apparently cuts down on wear and tear and means the base can be smaller. This in turn means that the Converta can... errm ... convert, from a hand-held stick into a tabletop device.

Now, the reason I'm telling you all this is that the guys who make the Converta are giving away 50 of the sticks to celebrate its arrival on the Amiga scene. They're also offering a brand new Star LC24-200 colour printer, which is a corking prize.

The big prize winner will get the printer and two joysticks, while a second prize winner will receive £100 worth of Amiga software and two sticks. And the 23 lucky runners-up will win a pair of sticks so they can compete with a friend on those tricky two-player games.

How to Enter

Simply write the answers to the following three easy questions on the back of a postcard or stuck-down envelope and send it to: Converta Compo, *Amiga Format*, 29 Monmouth Street, Bath BA1 2BW. All entries must reach us by 16 May 1991 and please, whatever you do, don't forget to put your name, address and phone number on there too!

Rules

Employees of Future Publishing and KPK Limited are not allowed to enter. The judges' decision is final. No correspondence will be entered into.

Questions

1. What is a 'Doppelganger'?
a) An unpleasant smell
b) a German tourist
c) A creature that takes the form of others

2. What's the definition of a 'double entendre'?
a) A statement with two meanings
b) An old French coin
c) A move in fencing

3. What is a 'D-to-A converter'?
a) An American legal term
b) Part of a digital sound system
c) An old hairstyle

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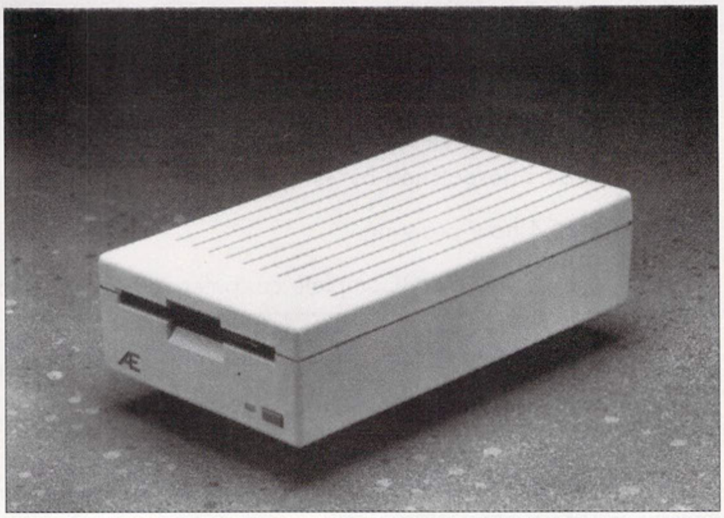
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Access · SWITCH · VISA

If you're serious about your Amiga, the first thing you'll probably do is install a few extra megabytes of RAM. Then perhaps a faster processor might be next on your list of priorities, or a good, big hard drive. But what about the old floppy disk drives?

The upgrade path lies in higher capacity drives – after all, the Mac and PC have got 'em, so why shouldn't the Amiga? Well, Stateside company Applied Engineering has come up with an external floppy drive that can store a massive 1.52 Mbytes of data onto a single 3.5 inch floppy disk. Not only that, but it is also completely compatible with standard Amiga 880K disks.

The AEHD is a good-looking piece of kit, finished off in Amiga cream, professionally-styled and of quality construction. If the case design seems to owe something to a Mac external drive, it's probably because Applied Engineering are also very active in the Macintosh market.



Held back by your Amiga's disk drives? **JASON HOLBORN** has found a device that almost doubles the amount of data you can store on a single disk.

AEHD Disk Drive

High Density Drive ■ £140 ■ Applied Engineering 0101 214 2416060

The AEHD is a good-looking piece of kit, finished off in Amiga cream, both professionally-styled and of quality construction. In fact, if I wasn't mistaken, I'd swear that they've stolen the case design from a Mac external drive. Then again, this wouldn't be at all surprising when you consider that Applied Engineering also dabble in the Mac market.

Getting the treatment

If you just plug in the AEHD drive and switch on, the Amiga will treat it like any other external 880K drive, ignoring the fact that it can handle high-density floppies. Indeed, if you insert a high-density floppy now, the Amiga will get stroppy and display the usual 'DF1:BAD' icon.

The reason for this is that the current release of the Amiga OS doesn't support floppies other than the 880k variety. To rectify this, Applied Engineering have written their own driver software that patches the OS (or the Amiga 'trackdisk.device', to be more precise) so that it can take advantage of the higher capacity that the AEHD offers.

Once patched, AmigaDOS treats the AEHD as two separate disk drives – one 880K floppy (DF1-3) and one 1.52 Mbyte floppy (DF5-7). The patching process can be carried out automatically during boot-up by adding a few extra lines to your StartUp-Sequence. Unfortunately the patch doesn't survive reset, which basically means that trackdisk has to be patched everytime you reboot your Amiga. This isn't too much of a problem *if* you have a hard drive.

> "There's no doubting what diference a high-density drive can make to the Amiga, but how many people actually need such a drive? If you're into data-intensive applications such as DTP, particularly with PostScript, or 24-bit graphics, it's ideal"

Like all high density drives, you can't format any old floppy as a high density disk. Instead, you must invest in special high-density floppies (these have an extra hole on the right-hand side of the disk and the letters 'HD' enscribed on them). It is possible to modify standard DSDD floppies to work with the AEHD, but I advise against such a practice – especially if you value your data!

Eject! Eject!

One very nice feature of the Macintosh is its 'AutoEject' facility which allows you to eject a disk from its drive through software. Obviously the Amiga doesn't support this as standard, but an extra utility is included which allows you to do just this with the AEHD. Once installed, all you do is hold down the left Amiga key and Shift and then strike the function key which represents the volume number of the disk (F6 for DF6 etc).

Those of you who feel more at home pressing a button on the front of the drive, Applied Engineering have also included one of these, so you're not stuck if you forget which key combination to press to eject the disk.

Pose value aside, AutoEject has its uses. Firstly, because the disk is not manually ejected, the drive will not eject a disk until it is safe to do so. Even if you press the eject button on the drive, the AEHD will not respond to your request until all disk operations have ceased. This basically means that if the computer suddenly decides to chuck a 1.52 Mbyte file out to disk, then you can be left waiting for quite a while before the disk is finally ejected.

Conclusion

There's no doubting what a difference an external drive can make to the Amiga, but how many people actually need a high density drive? Fact is, high density floppy drives aren't really of much use unless you're into such data intensive applications as DTP (particularly work with PostScript) or 24-bit graphics, in which case it's ideal. If your needs are fairly basic, then you'll probably get along perfectly well with a standard (and much cheaper) 880K floppy drive.

VERDICT

PURPOSE
High density floppy drive which can store 1.52 Mbytes on a single disk.

SPEED: ●●●●
Reads and writes data slightly slower than a standard Amiga drive, but it's hardly noticeable.

DOCUMENTATION: ●●●●
The manual is pretty basic, but it covers just about everything you need to know.

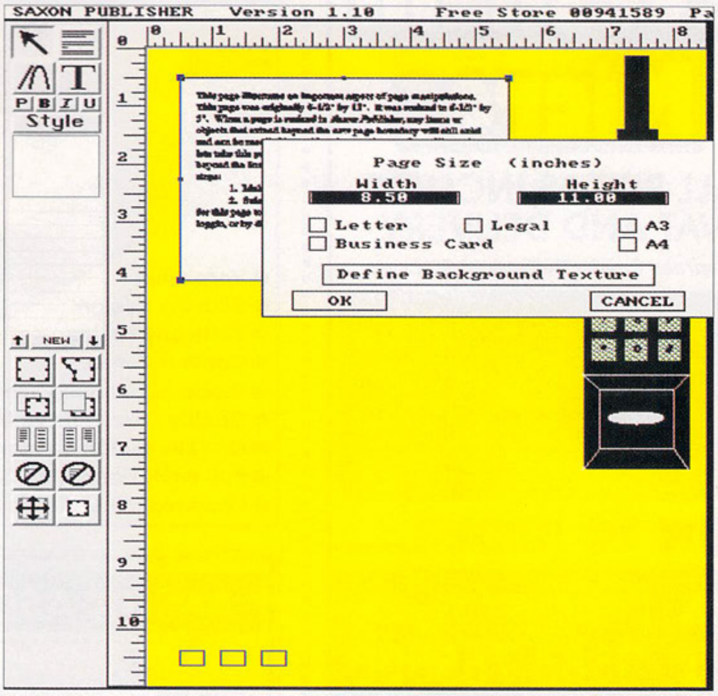
ACCESSIBILITY: ●●●●●
Copy a couple of files, add a few lines to your startup-sequence and you're away!

VALUE: ●●●●●
£140 sounds expensive for an Amiga drive, but it's cheap when you consider what it has to offer.

FEATURES: ●●●●●
The AEHD is certainly better equiped than the average disk drive.

A new progam enters the competition for desktop publishing package of the century. It features all the usual stuff you would expect, like full PostScript output, but also a lot of things which are not found on any other Amiga DTP package, like the ability to rotate and skew bitmap pictures and text to a variety of interesting angles. How can it compare in this highly competitive area?

The program works in a slightly different way to the other programs we're used to, and in use it is more like a program called *Ventura* on the IBM PC compatibles (which also has a popular cut-down version known as *Timeworks*). This approach contrasts with the more graphic, mouse-driven methods we're familar with in *Professional Page 2* and *Pagestream 2.1*. Surprisingly enough, though, it isn't much harder to use for that. In fact in a lot of ways I'd say it was a lot more efficient and logical.



Saxon in action. The program is unique among Amiga DTP packages currently, in that it uses a system of requesters to set up text styles and the like in advance, rather than manipulating them on the page with a mouse.

You've seen our opinion of DTP heavyweights Professional Page 2 and Pagestream 2 in Issue 20: now **PHIL SOUTH** looks at a new competitor...

Saxon Publisher

Desk Top Publishing ■ £199 ■ Saxon Industries/Surface UK 081 566 6677

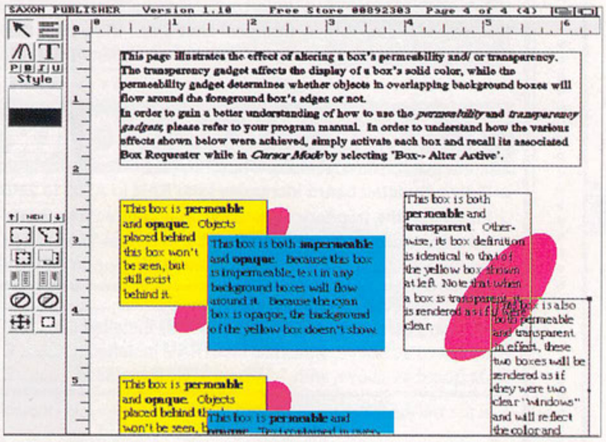
Most bits of text and graphics are 'tagged' and 'styles' are then chosen for them from a big requester, rather than the usual 'highlight and choose' methods employed in the other two programs. Although this generally means more thought has to go into your design before you actually sit down to program it up, this approach does have a certain ruggedness to it. The really useful trick is that once you have a style tagged to a particular bit of text or graphics, you can instantly put it onto another bit of text or graphic, just by clicking on it.

How it Works

The program can rotate, skew and scale text and graphics, and it does some very natty tricks on bitmap files to make them look better once it has rescaled them. It can also import 24-bit files for that extra professional quality to your output and it has the ability to do proper drop caps (the big capital letter at the start of a paragraph) which can't really be done easily on the other packages available. Text can be scaled from so small you can hardly see it, to over 2000 point – one letter would be as big as an A3 page! Not necessary, really, but impressive nonetheless.

Drawbacks

The major drawback to *Saxon* is that it doesn't support dot matrix or even



No prevaricating, now, let's get those box definitions right. The ability to define qualities such as transparency and opaqueness of a box or panel is a key to this kind of DTP work.

non-PostScript lasers or inkjets. Not a drawback in itself, as the best quality can be had from PostScript devices, but for a smaller budget production it comes second to *Pro Page*, which supports all manner of Prefs printers.

The other thing is that there aren't that many fonts on the disk, and there aren't any details about when we'll see some more. But there is support for downloadable fonts, although in what form is not really made that clear in the manual.

Conclusions

Saxon is unusal in its approach to DTP, and this may seem a bit daunting to a first-time user. But in spite of its unusal methods, the output is first class. The major problem which prevents this from being the best DTP package ever is the lack of printer support. The only way to get dot matrix output is to save to a file and use one of the many PostScript interpreters like *PixelScript*.

Obviously this puts *Saxon* very much in the professional market and out of reach, or uninteresting to, the part-time DTP artist. But that aside, users who have come from PC or Atari computer will feel right at home. The program works in everything from a 1Mb Amiga upwards, and comes on just one disk as opposed to the usual run of three or four that you can expect from others.

VERDICT

PURPOSE
Professional-quality PostScript desktop publishing package.

SPEED: ●●●
The interesting pre-set approach has overheads as well as advantages.

DOCUMENTATION: ●●●
Tells you what you need, but with a couple of exceptions and no added tutorials.

ACCESSIBILITY: ●●●●
Powerful text tagging and style requesters make this very flexible.

VALUE: ●●●
Expensive, powerful. Look before buying.

FEATURES: ●●●●
The only program to feature bitmap graphic skewing, but no support for Preferences printers.

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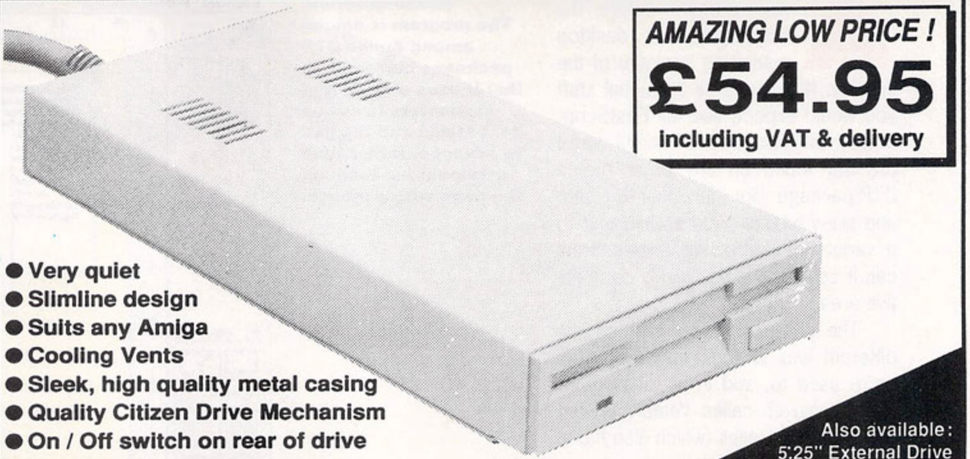
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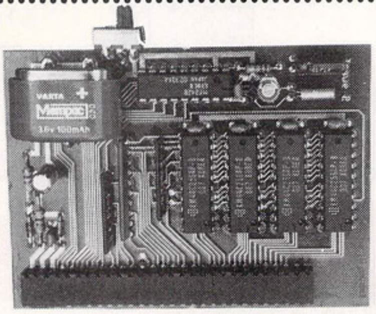


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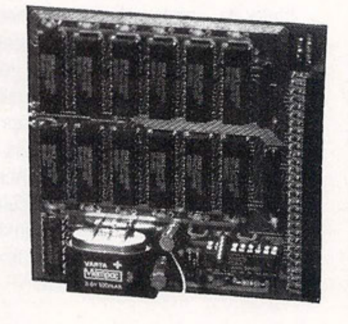
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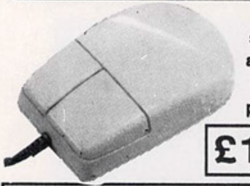
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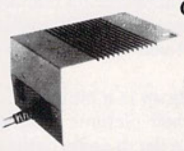
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Scala

From across the North Sea comes a new presentation system that blows sets completely new standards in user-friendliness. **PAT McDONALD** checks it out.

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You're in trouble. Someone has told you to produce a show on your beloved Amiga. You've got lots of ideas – maybe you have a few graphics and animations to display inside this presentation. But how do you tie up all the loose ends, get everything in the right order and make it idiot-proof? You use *Scala!*

You will need a souped-up Amiga to use this program – it needs at least 1 MB of chip RAM to work, so it will not run on a standard A500. Yet more memory and a hard disk are also highly recommended.

What you actually get for your pennies is pretty impressive. There's the *Scala* program disk, two disks with extra fonts and five more disks which contain pictures. The ringbound manual has 108 pages, but half of these are blank and the last 35 mostly contain copies of the fonts and pictures. Which saves you the time of loading them to see what they look like, I suppose.

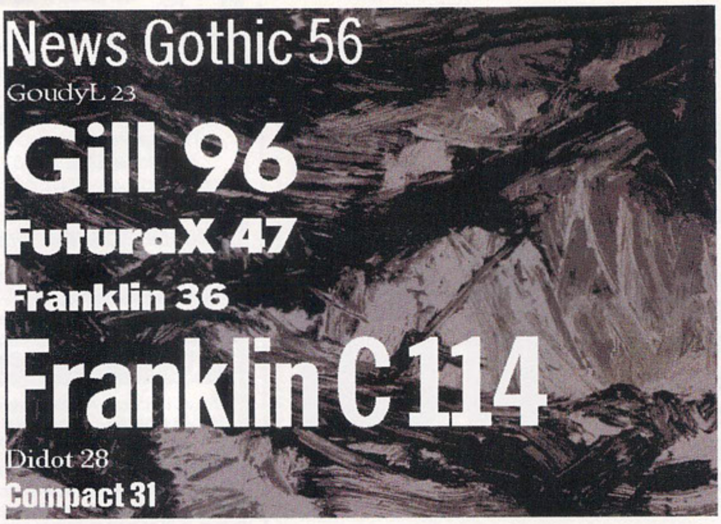
Just for a change, I read the manual from cover to cover before touching the program, and was thoroughly impressed with the way in which it delivered information. The first part is a very gentle introduction to *Scala*, which shows what you will learn in each chapter. It's very easy to follow, but I was a little disappointed that it did not contain any worthwhile technical information at all. Out with the disk then...

Get going

Once the program has loaded, it first shows a screen containing information about the first page of your presentation. There isn't one already there, so you have to click on 'New'.

The program then prompts you to load a background for the page. This background is displayed behind any extra text or graphics that you want to put in. You can either load one of the pictures which are included, or your own pictures (Scala will automatically recognise how many colours, and the resolution of the background picture).

From there the program goes to the editing menu. This is the main work area. If you want to put text onto a part of the screen, you move



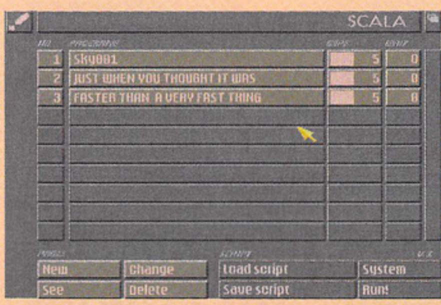
There are 44 fonts contained on the extra disks. Together with 59 background pictures, the whole set is a formidable starting pack to get you going.

THE SCALA SYSTEM

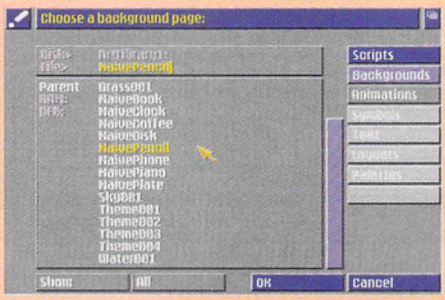
***Scala* is the most user-friendly program that I have ever seen on the Amiga. The way it makes you work is structured and very simple – all the functions are uncluttered and easy.**

For instance, when selecting fonts (assuming you've set up *Scala* on your hard drive sensibly) all you have to do is scroll down the list. If you want text at a particular location, just point and click – nothing holds you up.

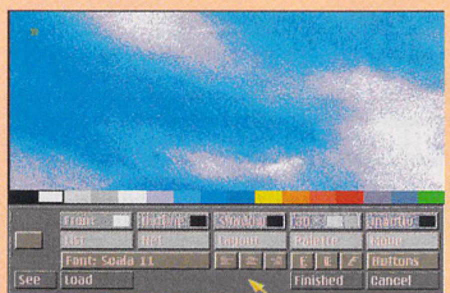
On the other hand, setting *Scala* up is a bit tricky – it expects everything to be to hand. Most people have all their fonts in one place, their pictures somewhere else, and so on. Once it's up and running though, it's so good to use – here's a list of some of the different parts of the program, and what they do.



CONTENTS MENU: This gives a list of just what is on the demonstration, page by page. Each page is named automatically, but you can change the name if you wish.



LOADING MENU: As you can see, loading different types of information is done at the touch of a button. The clever bit is that the buttons can be renamed, changed, edited and generally set up as you want.



TEXT MENU: Lots of different gadgets here. The font selector is easy enough – the button on the far right is the transition/wipe controller. Across the top is the palette used by the page (which depends on the background picture colours). Below that are the colours used by text, outlines and shadows.

the mouse there and click. A text cursor appears, and you can type away: *Scala* can be set to automatically wrap any words that are too long for the current line.

If you're not happy with the current font (or perhaps the size) then clicking on 'Font' will bring up a list of the available font types. There's a little display to one side, which indicates all the different sizes for the font. All you have to do is select the font and size, the program loads it up and off you go. None of that file requester nonsense.

Brushwork

If you have a brush that has been saved from *Deluxe Paint III*, then it's a snap to include it on the page. The only snag to it is that *Scala* calls them 'symbols' for some reason – this could possibly because that's what brushes are called in Norway, where *Scala* comes from?

Animations are handled differently. You cannot put a background picture behind them, but you can put text and brushes around them. The text can be set to display either before the animation starts, or after it has finished – but while the animation is playing, nothing else can happen. Text, though, put behind animations will be wiped out, but it is possible for you to put text in front of animations, after they have finished, with no trouble at all.

If you have a particular layout that you use a lot, you can save it as a template. So afterwards, text will be put into the same font and size at the same places. This saves a lot of effort when producing many pages with minor differences.

When you finally have the finished show, right from the beginning to the end, you can put a copy onto a floppy disk which will autorun. The problem is that such disks will only work on Amigas with at least 1MB of chip RAM. Once again though, it's a nice feature to have.

Special FX

Every time that you put text up or flip to the next screen in the presentation, you can put the graphics up using different effects. So you can roll up between pages, make them tile into place, and generally achieve very impressive results. Much better than just simply having graphics appearing instantly.

One of the best features of the program is that you can cut out areas of text and turn them into action buttons. When you click on that button, it will jump to a different page in the sequence, rather than the next one. So you could put up two buttons, one which offered to show you one subject, and another which would jump to a different page. This is the presentation angle of the program: you can design them to be totally idiot-proof.

Scala supports scripting. If you wanted to, you could literally write your presentation on a word processor (including all the file names and so on), load it into *Scala*, and then tell it to make the whole presentation up.

This is a very powerful feature, especially if you ever wanted to literally make a presentation from scratch from existing material. Together with the layouts, it makes creating similar presentations very quick.

There is one downside to *Scala*: you can't use sound. Not even a little bit. Your presentations will be totally silent, and there's very little you can do about this. Hum a tune perhaps...

THE COMPETITION

I don't know of any program that can do everything that *Scala* can. But there are programs which can do certain things much better than *Scala* does, and that's a fact.

***HyperBook* (reviewed in Issue 21) is very good at creating presentations. Using that system, you can lay out whole books which can be jumped around in a manic fashion – you can search for a particular word, and *HyperBook* will jump to that word if it exists within the presentation. It too can create stand alone disks.**

However *Scala* can import graphics in any form, except HAM, without losing colour. It can also play animations without any problems at all, and it's a lot easier to use than *HyperBook* if you are unused to computers.

***Broadcast Titler 2* (reviewed in Issue 20) is a dedicated video titler that really pushes. It can display up to 320 colours on a page, and the fades and wipes are really dynamic – plus it supports anti-aliasing, which means that the graphics titles it produces look amazingly good. But it can't do interactive presentations – just rolling sets of graphics.**

***Scala* is a good all-round program for putting together graphics and text onto a monitor. But if you used the above programs, your interactive programs would be more sophisticated and your video titles would look much sharper.**

The only program which really compares with Scala in every respect is *Deluxe Video III* (reviewed in Issue 9). As you might expect, *Scala* is dwarfed by the capabilities of *DVideo III*. On the other hand, you can produce results much more quickly with *Scala*, and you don't need to wade through the manual to find the right effect.

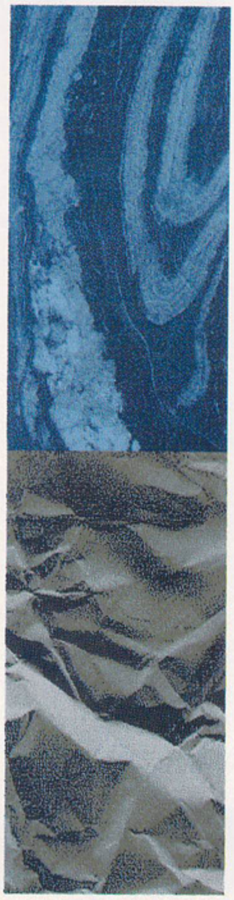


EFFECTS MENU: Scala doesn't actually mention what each effect does – but choosing and testing different ones is again a point and click job.

LAYOUT MENU: This is fairly simple, and controls such wonders as which way 3D outlines or shadows fall, as well as character spacing (which can be done by hand for absolute kerning perfectionists), outline and shadow depth, and the margins. The whole layout can be saved for setting up similar pages quickly.



Here are two of the included backgrounds. Quite honestly there isn't a bad one on any of the disks – they are also suitable enough for presentation or video work.



VERDICT

PURPOSE
User friendly presentation creator.

SPEED: ●●●●●
Never keeps you waiting once it has started.

DOCUMENTATION: ●●●
Very easy to read but lacks a deep reference section. Not informative enough.

ACCESSIBILITY: ●●●●●
Five isn't enough – it's simply the best in this department.

VALUE: ●●●
It's a lot of money, but you do get lots of fonts and pictures to start with.

FEATURES: ●●●●
Well, you can load animations, fonts and text, but where's the sound?

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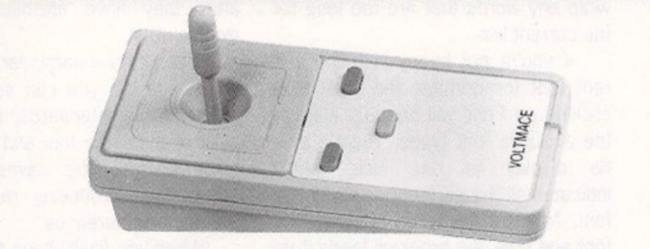
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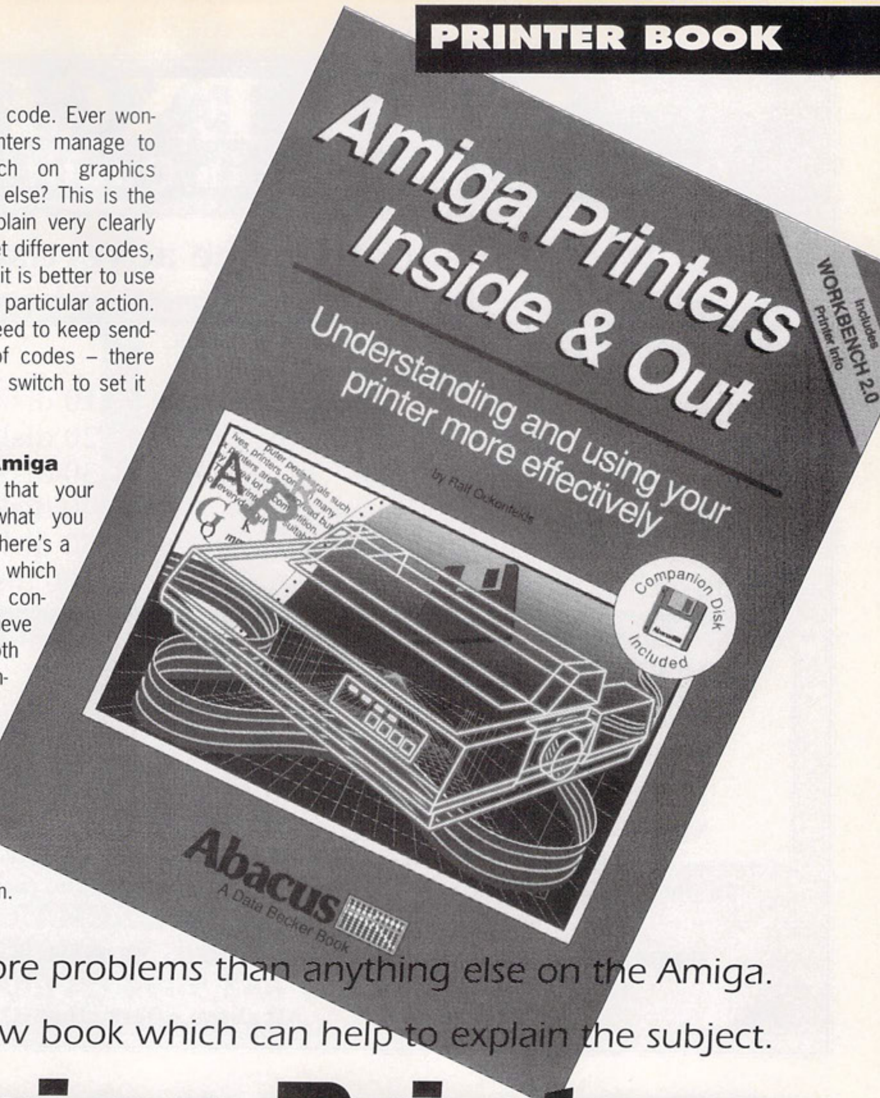
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Setting up your printer can be so infuriating. You need to get a special lead to connect it to the computer, often there's no plug... Even when it's all wired up, your problems are just beginning.

The real trouble is that there are hundreds of different models, dozens of manufacturers, and over a score of standards for printers. Printer technology is very similar to the computer way of doing things: companies all work on their own machines, ignoring other manufacturers, and they are forever updating their printers to be more complex but cheaper.

How can you find the answers to problems? *Amiga Printers Inside and Out* is the solution. This book will tell you everything you ever wanted to know about printers, and a whole lot more besides.

What you get

The book contains 254 pages of excellently presented information. There are lots of line drawings, plenty of gags and many explanations and definitions. It starts simple and then it gradually builds up...

sending the correct code. Ever wondered just how printers manage to switch fonts, switch on graphics modes, or anything else? This is the key. The pages explain very clearly how printers interpret different codes, and why sometimes it is better to use a DIP switch to set a particular action. (There is often no need to keep sending the same set of codes – there could well be a little switch to set it permanently.)

Enter, the Amiga

Once you're sure that your printer won't do what you want with a switch, there's a very large chapter which deals with different control codes to achieve different effects. Both fairly standard commands and some of the specialist protocols (such as Epson and IBM Proprinter) are dealt with too. This is an excellent reference section.

Printers seem to cause people more problems than anything else on the Amiga. **PAT McDONALD** looks at a new book which can help to explain the subject.

Amiga Printers Inside and Out

Printer reference book ■ £29.95 ■ DTBS 0706 524304

First off it gives a run-down on dot matrix printers (the most common variety by far these days). From the print head with all the pins, down to the different bits that take the computer information to it, the words take their time in making a simple but comprehensive explanation.

After that, a run-down on how computers talk to printers is put across. Serial or parallel interfaces and the differences are gone over in some detail, so you know where to connect the printer to your computer. There is a similar discourse on setting DIP switches correctly, and the different systems used for feeding paper through the printer.

The book has explained the basic concepts of printers, but at this point it starts giving away some not so well known information. It goes into printer codes in some depth: why some printers have many knobs and buttons to change the way they work, and others look fairly plain but have all the main features changed by

The next section goes right through graphics systems, both on the computer and inside printers. It explains eight- and 24-bit computer graphics (not the 24 bitplanes for millions of colours concept – I mean 24 X 24 grids). Then it informs you just how printers cope with these, ie nine-pin and 24-pin printers.

This is an excellent section, because graphics are probably the biggest stumbling block on printers. Many people can get their machines to print text from word processors, but don't have any idea why the graphics printing doesn't work properly, if at all.

Following that there's a really good troubleshooting section which covers many quirks with certain kinds of printers. After that comes a quick description of other types of printer (nothing on laser printers though) and finally the technical reference section for the real tech heads.

Whether you're totally ignorant on the subject and want to learn the basics, or you're willing to put in the effort and learn to create printer drivers to taste, this book has the lot. Personally, though, I think there's an awful lot of people who can't or won't be bothered to learn more – which is a great shame, because this book deserves to succeed.

THE REASONS WHY

Commodore use the (in)famous printer device concept – each printer has its own special driver which is set from Preferences. This converts a set of standard Amiga controls into the individual set of codes used by the hordes of 'compatible but slightly different' printers.

These are very important when setting up your printer to take care of the special effects side: some do extra tall or short characters and so on. How do you set up the whole lot to the best effect if you can't find a suitable printer driver?

Bound into the back pages is a disk (so it can't get lost before you get the book). On this disk is a suite of utilities just for modifying existing drivers. A great use of an old concept.

***Amiga Printers* explains exactly how to use them and what they can and can't do. The programs are *BeckerText*, *TextPro*, *PrtDrvGen* and *PrintTool*. Most of these are Abacus' own programs specially writen for this book – though *PrtDrvGen* has been in the Public Domain for years now.**

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Sample it, Grab it, Scan it!

In the real world, the physical place we all live in, information comes in analogue form – continually variable levels of light and sound. In the world of the computer, information can only be handled in digital form – 'discrete levels' – on or off, black or white.

Scanning images is all about converting these three-dimensional objects into streams of numbers that can be moved, manipulated and stored. Desktop scanners are a comparatively new form of input device. Three or four years ago, hardly anyone had heard of them – but now many magazines and designers use as them as part of their work and lower-cost versions are available for the Amiga.

The scanner wouldn't be here if it wasn't for the popularity of the video recorder. As video got more popular, the manufacturers looked around for a cheap way to let people make their own videos and came up with the camcorder. Because conventional cameras were so expensive they developed a new, cheaper light-to-data processor called the CCD (charged couple device).

This is basically a microprocessor divided into a number of separate pixels (like a monitor) with a clear window above the main chip. When light falls onto it, it gives out an electrical signal equal to the amount of light. By focussing an image on it, you can use it as a camera.

What's the connection between this and a hand scanner? Well, take a camcorder and glue the lens so that it only focusses at it closest setting. Remove the scanning circuits that turn the signals from the CCD into pictures and solder the wires onto an analogue-to-digital converter, so your computer can recognise the signals. Cut out the recording heads and send your signals directly to a computer and you have a hand scanner.

The Real Thing

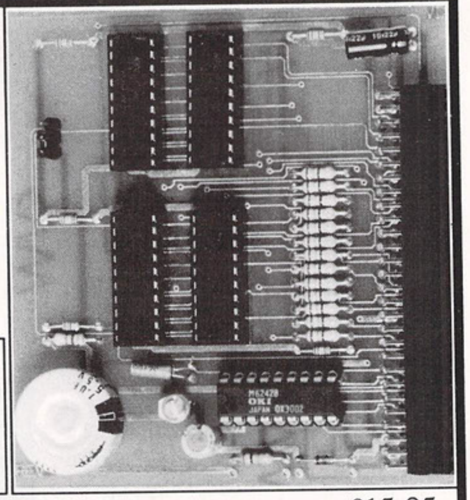
In reality, a custom-built scanner uses a single line of CCD pixels across the scanning area as opposed to the block of CCD pixels used in a camcorder. The main features of a scanner are its resolution, density range and colour bit depth.

Resolution is the number of dots the scanner uses to capture an image with and is usually measured in dots per inch (dpi). Most hand scanners for the Amiga scan well to about 200dpi and OK to about 400dpi (only OK because with all the extra data being transferred at 400dpi, they tend to make some of it up).

The **density range** is the difference between the lightest and darkest areas a scanner can scan and is measured in density units. This is only really important if you are into high-end professional scanning.



If you want to use pictures in artwork and printing, the best way to get them there is using a scanner. Whether it's rough-and-ready for punk art or highly detailed for the most sophisticated stuff, **PAUL LYONS** shows you how.

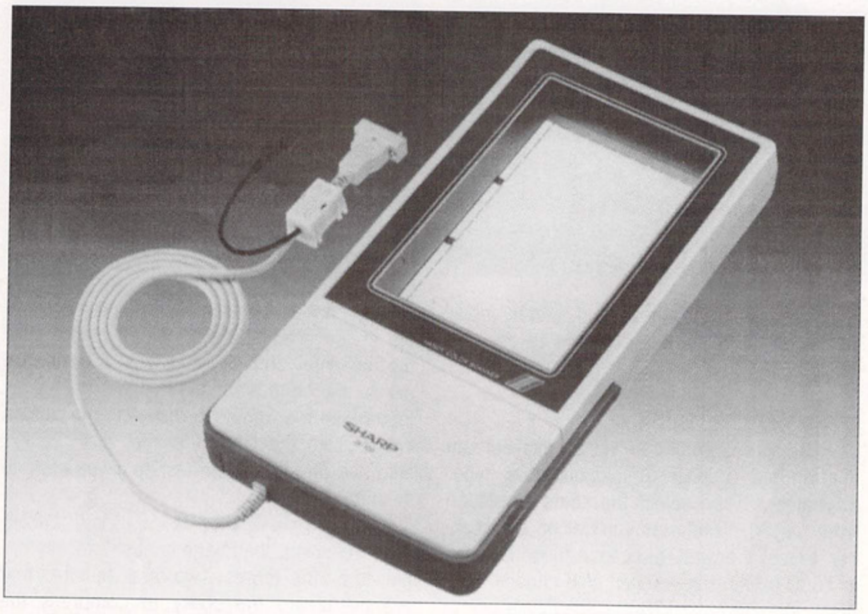


If you're scanning in full-colour images, the **colour bit depth** of the scanner is also important. This is the number of different colours the scanner can scan. A scanner that only detects black or white (for scanning text or line art) is a 1-bit scanner, if it can detect four levels of grey, it's a 2-bit scanner, 16 levels gives a 4-bit scanner and so on up to a scanner that gives a photographic-quality image at 24-bits and can sense 16.8 million different colours. The two greyscale scanners featured here only detect four levels of grey, but if you are intending to print things out on a dot matrix printer, you won't need any more.

However, a scanner is not all you need to scan and save images. To start with, scanned images are big. A 7-inch by 5-inch colour scan with the JX-100 takes up almost 4Mb of memory. That means to acquire it you need to have 4Mb of spare RAM in your Amiga after loading the Workbench and the scanning program. For smaller black and white images you can get away with a 1Mb Amiga, but a second floppy and a lot of patience will help a great deal. If you're seriously thinking of doing lots of scans, then a hard disk is vital.

Sharp JX-100 ★★★★★

£545 + VAT ■ Sharp ■ 061 833 0226



Sharp are one of the biggest names in colour desktop scanners. Their larger models such as the JX-600 are used by Macintosh- and PC-based designers and publishers to produce high-quality magazines and artwork. All of Sharp's scanners can be connected directly to the Amiga, but as the high-end JX-600 costs over £13,000 we've decided to look at the baby of the family, the JX-100.

Just because this is the bottom of Sharp's range doesn't mean that it's the poor relation. On the contrary, all the colour pictures in *Amiga Format*'s infamous sister magazine *New Computer Express* are scanned using the JX-100.

The scanner is a strange-looking device, like something that a double-glazing salesman might carry around to demonstrate his product. Unlike most other hand-held scanners you don't have to move the scanner while you are copying an image. All you have to do is put the scanner on the picture to be scanned and watch while the scanning head glides along between the two sheets of glass. This clever design means that all the problems of moving a scanner in a straight line by hand have been eliminated.

Another thing that strikes you about the scanner is its quality. It's a solidly-built device that feels a lot sturdier than most other hand-helds (a good job too, as it costs three times as much).



Installation

Installing the scanner is simple. Plug the adaptor into the mains, the scanner into the serial port and the disk into the slot. The software can be run from a disk drive, but there's also an installer program included to install the application on your hard disk. It has to be said that to get the best out of the JX-100 you really need 4Mb and a hard disk.

The Sharp JX-100 comes complete with the *ScanLab/100* software from ASDG Incorporated. ASDG are well known for their excellent *Art Department* image processing program (reviewed Issue 17) and the interface of *ScanLab* is almost identical.

Unlike other scanning programs, *ScanLab* is a straight capture-and-save program that allows you to save the image in a number of formats so that it can be loaded into and manipulated by paint packages such as *Deluxe Paint III, Photon Paint* or *DigiPaint.*

Use it

There are two main screens in *ScanLab,* the preview screen and the fine screen. The preview screen allows you to get a basic monochrome scan of an image, from which a section can be chosen for the main higher resolution scan. On the preview screen you can set image size, brightness and resolution. The screen also contains information about the amount of memory required.

The fine screen allows you to set more complex scanning parameters such as colour bit depth (the number of different colours in the image), size and percentage scale, resolution, image display type (PAL, NTSC, etc) and save file type.

The fine screen also has two other controls, balancing and dither. Balancing allows you to change the amount of red, green, blue or all colours in the image in addition to the contrast (or gamma). Dithering is a process that makes the image appear to contain more colours than it actually has. You lose some of the sharpness, but in mage processing you can't have everything...

The combination of the JX-100 and *ScanLab/100* produces excellent results at a comparatively low price. In fact the main problem is finding an output device good enough to show the quality of the images as well as the screen display does. To go one step up in quality you'd have to get a flatbed scanner costing over £2,000 or more.

Datel GeniScan ★★★

Datel ■ £169.95 ■ 0782 744707





The GeniScan is Datel Electronics' addition to the scanning arena. At first glance it looks almost identical to the Golden Image scanner (below) although the case is slightly shorter and more squat. The specifications of the two scanners are identical: 100, 200, 300 or 400 dpi; black and white to four grey shades.

Installation is also identical: plug the scanner interface into the serial port and the power supply into the mains (the Datel power pack is better and has correct UK pins on it).

The *ScanEdit* software is a small application that can either be run from the disk it's supplied on, or installed on the hard disk (we followed the instructions on the supplied Read Me file and installed it on the hard disk, no problem at all).

The main way in which the these two packages differ is in the software. While the Golden Image includes a fully-featured (but slooow) image manipulation program, The GeniScan just offers a straight scan-and-save package. There's no smart palette of tools here – a hidden menu-bar holds all the commands necessary.

The program uses a large buffer that allows you to scan an area larger than can be displayed on the screen and either move around at full view, or zoom out to see the whole buffer area.

Scan It

To scan an image, first select the correct setting on the scanner (resolution, scan type, brightness). Then select the same resolution from the Scan menu as you set on the scanner. Select the width of scan: a full-width scan is 1600 pixels, but you can also choose from 400, 640, 800 and 1280 pixels. Finally select the length of scan from one to four screens.



As you choose the length, the light will come on on the scanner ready for scanning. Hold the scanner steadily and pull it smoothly across the page.We found that we could scan faster with the GeniScan than with the Golden Image. Like the Golden Image, this scanner also has an LED which flashes if you start to scan too fast.

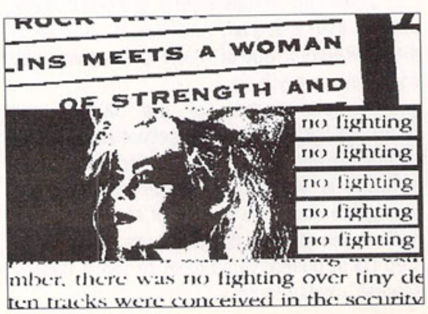
Use It

After scanning, the image is automatically displayed on the screen. Two other features that are useful are the ability to compress the image to fit on the screen and the ability to join two scans together side by side to form a single-layer picture. Images can be saved out either in RAW or IFF format for use with other graphics or page make-up packages.

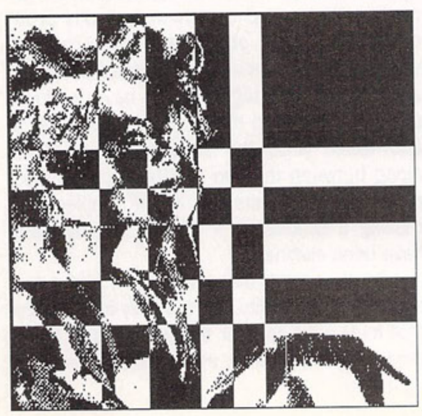
The software includes a few basic editing tools. You can cut, copy or paste bits of the image or the whole image can be made into a negative, flipped upside down or mirrored, left to right.

The GeniScan is a fine tool for such a low price. The lack of editing facilities is not a great loss as anyone getting into scanning will probably want to buy a better paint package than Datel could have afforded to include.

Simply messing about...

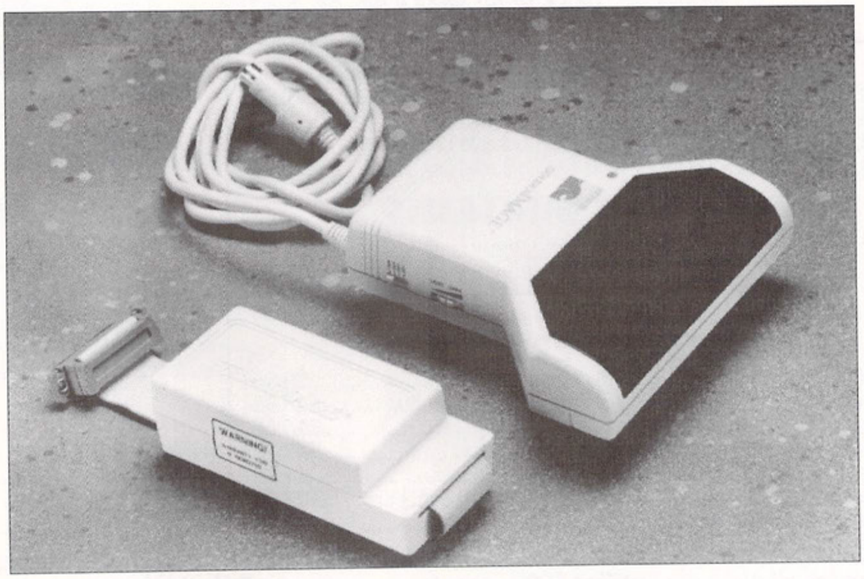


The hand-held scanners tested in this piece are particularly good at two-colour black and white art, which is great for atmospheric and moody effects and particularly useful for posters, fanzines and other 'punk art' uses. The use of inverted areas in pictures (black swopped for white) is very trendy and very easy to do. Don't be afraid to skip the scanner over a number of bits of an image and see what happens, or blow a greyscale picture up so the pixels look very blocky.



Golden Image ★★★

Golden Image ■ £167.85 ■ 081 518 7373



Of the two mono scanners featured here, the Golden Image model is the only one to include image retouching manipulation facilities in its software. The scanner itself is a compact hand-held package.

In addition to setting resolution in software, there is also a switch on the side of the scanner which has to be set to 1,2,3 or 4 (hundred dpi). There is also a dial to adjust the brightness of the lamp and a mode switch which tells the scanner to scan in black and white or up to four shades of grey.

Installation is pretty simple. The scanner interface plugs into the Amiga's serial port, and the scanner power supply plugs into the mains. Unfortunately, Golden Image have used a cheap-looking two-pin power supply that needs an adaptor and the whole thing teeters precariously in the wall socket.

The software can be run from the disk, but as it recommends installation on the hard disk, that's what we did. No installer routine here, so we just dragged the drawer onto the hard disk and (after just a bit of annoying fiddling around) it worked.

The software included is *TouchUp* by MiGraph. This is a fully-featured image manipulation and paint package with more features than it's possible to describe in short a small space. Unfortunately, the manual has the same problem. It's 171 pages long and really badly organised. The Guided Tour doesn't even mention scanning, a process which is only described at the end of the scanning section around page 90. Still, it's not a bad manual – just badly-organised.

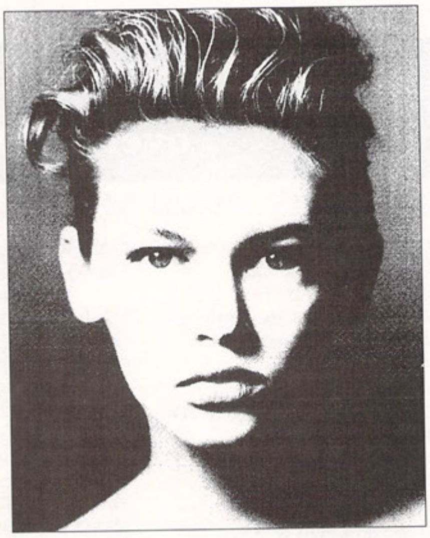
Scan It

To scan an image, first set the switches in the scanner to the required settings and select the length of the image you want to scan (2, 4, 6 or 8 inches). To start the scan you press and hold the start button on the side of the scanner and pull it slowly across the image.

To help you get the speed right there's a small LED on the top of the scanner. If you go too fast, instead of staying on the light begins to flash, telling you to slow down or lose data. The speed of scanning was one of our main complaints. On higher resolutions, you have to move the scanner so slowlyly to avoid the flashing light that keeping the whole thing going in a straight line becomes really difficult. In fact the quality of the images from the Golden Wave was far better than those from the GeniScan, but we've given them the same number of stars because even on our porky test A2000 (with 5Mb of RAM), the whole program runs really slowly. If you have the patience to put up with this minor problem, its a fine piece of kit.

TouchUp does allow you to flip, rotate, slant, clean up, outline, stretch and resize images, but impatient users will want to save their files and open them in *DPaint III*.





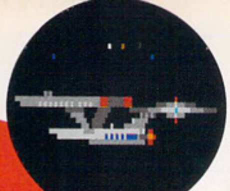
And there's more...



We confidently expected to feature two other hand-held scanners in this review, but unfortunately neither of them were ready to be reviewed. These two could well be waiting for before you make a buying decision.

The first is from Naksha, well known for their mice. We don't know an awful lot about their hand-held scanner, but it is believed to be quite similar to the Golden Image model as far as the hardware goes. We're told that the software is of a higher standard, but of course we can't really comment until we've seen it. Currently we have no news about when it will arrive. More details from Naksha on 0925 56398.

The other hand-held will come from PanDAAL, who have a high reputation for their Atari ST products, including this scanner. Their scanner very nearly made it in time for this review, but was held up slightly by a last-minute rewrite to speed up the operation of the software and a tweak to the interface, a laudable attention to detail. It was finished the day this went to press, so expect its arrival very soon and a full review in the next issue. PanDAAL can be contacted on 0234 855666.





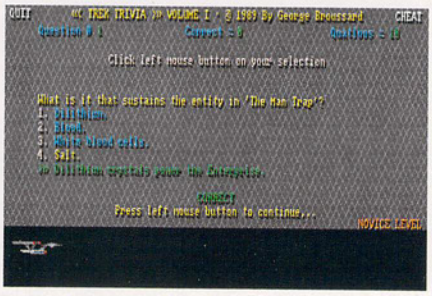
PD Update

If you want to find the best of the latest PD releases, then check these pages out. **PAT McDONALD** gives info on utilities and games.

STRATEGY GAMES

UNIQUE GA-037

Would you perhaps like a set of fun, brain games rather than the endless shooting and platform games about? Check this disk out – it's packed with some quality PD programs.



If you're a Trekkie, how about the infuriatingly involved *Trek Trivia?* This is an update on the one that's been out for a few years, and has lots of different questions, a good scoring system and very good presentation. In the background the occasional sample from the series plays away, to build up the atmosphere a bit. A nice big thumbs up to George Brassard for this one.

If you prefer board-games, then *Paranoids* may be more your cup of tea. The idea is to escape from a lunatic asylum, and the game features all the bits – dice, cards and pieces. The difference is that with a computer version, you never lose any of it. Good two-player fun from Gary Teachout.



And, finally, there are a couple of real classics in there – quite a good one is*Reversi* by Marc Fischlin, and *Chess V2.0* which was authored by A H W Kaufman. Both of these have computer opponents for when you're on your own and you want to teach your Amiga who's boss.

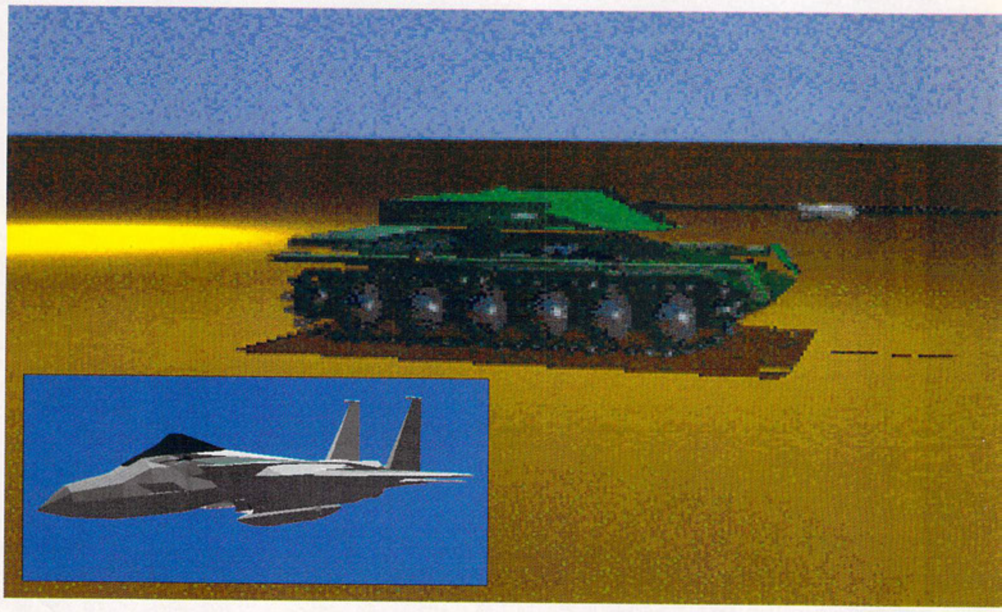
SCULPT OBJECTS

SENLAC

When you first start to play around with any of the *Sculpt* rendering programs, you are blocked by the lack of objects to see what the program can do. What's all this about objects I hear you ask? Well, if you want to render an image with an aeroplane in it, first of all you have to draw the plane as an object.

Unless you have bought one of the Senlac Sculpt libraries, that is. For just a few quid you can lay your hands on lots of different objects, that are already designed to be popped into your Sculpt scenery.

Each of these disks is Licenseware. This means that although you can use these objects in your animations or pictures with no copyright hassle, you must get the disks from Senlac only – they're the ones licensed to carry the disks from the original designers.



BALLOONACY (1 MB)

AMOS APD115

A classic game revitalised by Delboy Dobson with the help of AMOS. *Balloonacy* is a simple but addictive game featuring a hot-air balloon stuck above a city. You have to drop bombs to flatten the skyscrapers (which isn't an original idea) but there are several subtle twists.

For one thing, vehicles speed across the bottom of the screen – they're worth extra points if you bomb them. The height of the balloon is adjustable – it gently drifts downwards if you leave it alone, or you can switch on the gas burners to gain height.

The challenge of the game is when aerial objects hurtle across the screen, and then it's time to get out of the way, especially if it's a missile as those scumbuckets really whiz along. Simple but lots of fun.



Public Dominator, Amiga Software –

What is Public Domain?

Public Domain Software is simply software that is allowed to be copied freely, since the authors have decided to share their programs with all users. For this reason software can be grouped together on disks which are sold at an equal price depending on how many you buy. When you buy any of the disks on this page you may copy and give them to anyone! Each disk has a code number which is denoted with this symbol - •- what follows the code number is a brief discription of what is on the disk. All the programs are fully working and most come with documenation on the disk. We will also give as much support as is reasonable.

FONTS

•PDOM53 - Fonts! 12 fonts: Black Shadow, White Shadow, Avant Garde, Palo Alco, Basel, Monaco, Piegnot, Aldous, Celtic, Geneva and Rangers. All ready to use DPaint compatible fonts.
•PDOM54 - Fonts! 14 fonts: Lineal, Bubbles, Ham, Courier, Vancouver, SanFran, Future, Premiere, Hollywood, Broadway, Camelot, Stencil, Park Avenue and Los Angeles. DPaint compatible.
•PDOM55 - Fonts! 14 fonts: Santiago, Microsoft, Silicon, Swansong, Helvetica, Mahattan, Bookman,Akashi, Times, Tiny, Boxie, Longl, Andover and Pica. DPaint compatible.
•PSFF1 - Fletcher Font Pack 1 contains 66 MULTI COLOURED IFF fonts on 6 disks for £15.00. All fonts are suitable for DPaint or any program that uses IFF fonts.
•TBAG29 - ShowFont V3.3 shows all 256 characters in a given font.

APPLICATION

•AMP1 - Home Business Pack : UEdit the easy to use wordprocessor, Visicalc and VC 2 spreadsheets, RIM and Jbase databases and Amiga Spell the spell checker etc. 3 disks only £7.50!
•FFISH195 - Micro Emacs V3.10 the text editor which is very comprehensive.
•FFISH254 - UEdit v2.5a the wordprocessor
•FFISH143 - RIM V5.0 is a fully relational database.
•FFISH328 - AnalytiCalc V24-01a is a full featured system for numerical analysis and reporting (a spreadsheet).
•FFISH93 - Dme V1.27 and MicroEmacs V3.8i the text editors.

TELECOMMUNICATIONS

•PDOM416 - NComm V1.9 communications program THE only disk you will need, got a modem? Then this is your disk.
•PDOM59 -Ameteur Radio Disk: StarTerm V3.0, P81 and P10272 packet terminal programs, TA Term V5.0, a HAM Database for the Amiga Amateur Radio Group, Morse Code, Satellite Tracking and loads of HAM utilities. A must for serious HAM user.
•AMICUS17 - Aterm V7.2, VT-100 V2.6 VTek V2.3.1, Amiga Host V0.9 for CompuServe.
•APDC21 - Comm V1.34, Wombat V3.01, Handshake V1.20a C-Kermit.
•SLIPDISK31 - StarTerm V3.0 full features terminal prog, VT100 V2.0, Comm V1.3, AHost V0.9.
•FAUG62 - Access V2.6 comms package.
•FAUG99 - TAG the BBS.
• FFISH 172 - HandShake V2.12a is a fully featured VT52/100/102/220 terminal emulator.
• FFISH 275 - VT100 v2.9 includes Kermit and Xmodem.

NEW AMIGA USERS

•AMP4 - Starter Utility Pack: This pack was compiled with the new Amiga user in mind, to enable them to get just about all the utilities that you may ever need, plus a wordprocessor and a database! Each disk in the pack automatically takes you into the friendly Work Bench enviroment, all the programs are icon driven and have any necessary documentation. The pack includes: The four main file compressors used on the Amiga - ARC, LHARC, Zoo and Power Packer, Dir Work the friendly enviroment that allows many of the CLI commands to be executed at the click of your mouse, Text Reader allows you to execute text on screen as a CLI command using your mouse, DFC2 the multi tasking disk copier, All the AmigaDOS Replacement Project commands, Virus X the virus detector and destroyer, Icon Meister the excellent icon editor, Comm the communications package, MachII the mouse accelerator, Disk Storage Deluxe displays information about disk drives, Disk Salv attempts to salvage data from damaged disks, New Zap the sector editor, Safe Boot the boot sector database and others. Also UEdit the wordprocessor, Amiga Spell the spell checker and JBase the excellent database.
All this is available on 3 disks only from Public Dominator for the mega price of £7.50!

UTILITY

NOTE: We have chosen the best disks with the latest versions of utilities to feature in this advert, however many more files and utilities are featured in these and other disks but are not detailed here; FULL details are to be found on our DiskCat for £1.00.
Our DiskCat has a fast search option for ease of use.
•FFISH366 - PrintStudio V1.2 print any text file in many styles, print part of or a whole picture, screen or window, also control printer and much more.
•FFISH362 - ArchEdge V1.5 a shell setup for ARC, ZOO, LHARC.
•TBAG3 - Disk Cat the disk cataloguer.
•TBAG4 - DirUtil 5 the disk manager.
•TBAG6 - Biorhythms the life cycles program, Blitz Fonts speeds up fonts.
•TBAG9 - FastMem toggles on/off Expansion, FuncKey assign text to F1-F10. Word Count the number of words in a file.
•TBAG10 - AutoPic2 shows all (.PIC .HAM) in directory.
•TBAG13 - StepRate change step rate of disk drive.
•TBAG16 - CLI Wizard V1.2 mouse operated CLI. Introducer DIY demo with your own picture, text and sound! Planet will wrap a flat IFF picture into a sphere.
•TBAG17 - Database Wizard V1.1 name & address database for 400 records.
•TBAG18 - BIG is a screen magnifier. DoTil V3.4 the directory utility.
•TBAG19 - Pyro a screen blanker shows a fireworks display.
•TBAG20 - Brush2Icon turns a brush or picture into an icon.
•TBAG21 - VScreeen allow screens to be larger than the physical one, also lots of window utils: WSize, WMove, WMax.
•TBAG23 - Crunch2 archive a program but still executable. Hermit saves screen at keystroke. using hot keys. Pointer Animator 15 colours animated pointers. ScreenX V2.2.
•TBAG24 - ClickDOS V2.04 directory lister. QView V1.0 text file viewer.
•TBAG26 - Daisy Wheel IFF picture file printer.
•TBAG30 - MyMenu create your own menu on WB to run any commands. Icon Meister V1.4 THE Icon editor. Disk Storage Deluxe V1.10 shows details of ALL mounted devices.
•TBAG38 - MadSizer allows you to size a window from any corner. Display V3.29 an anim displayer for ANIM 3,4 and 5, Hash and IFF all in any resolution.
•FFISH342 - IE V1.0 is an icon editor which can create and modify icons upto 640x200 pixels.
•PDOM278 - LHARCa V0.99a data compression program that is 100% compatible with MSDOS LHARCV1.13c.
•PDOM279 - European Software Agency Utility 1: Amiga ToolV1.5, Boot DIntro V1.0, BootGenerator V1.5, BootLeg V2.1, Character Editor V1.0,Coder Board V4.0, Cosaque V1.1, DCopyII, Deluxe Presed V2.0, BlockV1.3, Font Ripper, Guru Maker V1.0, ISCAmiga v1.5, Memory Searcher V1.0, Menu Maker v1.0, No1Setracker V1.0, Power Utility V2.0, PowerPacker V2.3a, PPMoreV1.2, Pseudo Ops. Save IFF, Scanner V2.0,Scroll Maker 2, Seek Destroy V1.0, Seka Source Rescuer, StartupCoder V1.0, Structure HunterV1.0, Time Cruncher V1.1, TVField Writer V1.1, Vector Check V1.0, View Boot V1.01, Virus Expert V1.4, Virus Slayer V1.0, VirusKiller V3.10.
•PDOM280 - The Champions Total Utilies Vol 1: Boot Generator, Boot Girl, Bootmaker, BootWriter, Character Editor, Demo Maker, DiskX v2.2, Flash Ripper, Font Ripper, Guru Maker, Guru Master, Icon Master, Make A Menu, NoiseTracker, Power Packer V2.3b, PPMore, PPShow,Sceneray, Graphics Searcher, SetKey, Slide Show Maker, Time Set, Tristar Virus Killer and TxED.
•FFISH163 - MachII V2.4c features: configurable, your help screen, mouse accelerator, PopCLI, Screen Blanker, Mouse OFF, SunMouse (activates a window by placing mouse it), Click To Front (bring window to front by clicking on it), Cycle (move a window or screen to back with left then right mouse button click), Window and Screen Shuffler, CLock, Alarm, Beeper etc.
•FAUG50 - Short Cut allows you to allocate text to a single key stroke thus CLI commands are easier to type.
•PDOM141 - ICONS!: Draw Icons, Tool Icons and Disk icons. Includes software to edit.
•PDOM276 - Amivision Utility Disk 4: Virus X4, Zero Virus, Kill Da Virus3, PCopy, VCheck, Sectorama, FFormat v1.1, Pseudo Virus Killer 2, Boot Intro.
•PDOM300 - The Master Virus Killer V1.9. Recognises 105 viruses, a full list is on our DiskCat.
•PDOM277 - Dark Star Virus and Crunchers 2: BS9 KillerX, Kill'Em, Lamer Destroyer, Pseudo Ops, Killer and Seek & Destroy virus killers. Byte Killer, Crunch Master, Data Cruncher, DefJam Cruncher, Crunch IFF Pics with shower, DPaint Unpack, DragPack, Flash Packer, HQC, ISC, Master Crunch, Mega Crunch, Power Pack, RSI Cruncher and Super Cruncher.
•TBAG31 - ShoWiz V2.0 show ANY picture with or without a script, 1 picture or several disks full, also play a music file in the background! Also show text files in any colour!
•FFISH105 - Record-Replay V2.0 allows you to record and play back mouse and keyboard sequences.
•PDOM62 -The Public Dominator Anti Virus Disk: Virus X V4.1, VCheck V1.2 (for memory), VCheck V1.9 (for disk drives), ZeroVirus V1.3 the fully integrated virus detector and killer. Also BootBlock Champion the utility and information on boot blocks.
•PDOM93 -ARP v1.3. The AmigaDOS Replacement Project includes text manual files.
•FFISH228 - Jazz Bench V0.8 is a multitasking WB replacement.
•FFISH229 - Alarming Clock.
•FFISH246 - NoClick V3.6 stops drives clicking when no disk entered. LabelPrint v2.5b disk label printer.
•FFISH251 - DiskSalv v1.42. DiskSpeed v1.0 test disk speed.
•FFISH286 - FastDisk a disk Optimiser.
•FFISH290 - XIcon execute CLI commands from a script by clicking an icon.
•FFISH338 - SID V1.06 is a very comprehensive directory utility.
•PDOM304 - MessyDOS handles MSDOS formatted disks exactly the same way as you use files on native AmigaDOS disks. Fully functional, read/write version.
•FFISH325 - Batchman V1.1 is a program that allows the user to execute CLI programs and batch files simply by clicking on a gadget.
•FFISH304 - Verify V1.2 Walks a directory hierarchy reading all files, reporting any files that can't be entirely read.
•FFISH243 - ImageLab V2.2 is an IFF pictures manipulator. NoClick V3.5 stops the disk drive clicking if there is no diskin thedrive. PassWord V1.21p you specify the password for your systemsecurity. Pcopy V2.0 the excellent disk copier. SimGen adds a 2 or 4 colour picture to your WB screen.
•FFISH360 - UUCP V1.06D. An implementation of uucp for the Amiga, including mail and news.
•FFISH244 - BBChampion V3.1 load, save and analyze bootblocks. BootIntro V1.2 you specify The headline text of upto 44 characters and the scrolling text of upto 300.
•FFISH279 - MRBackup v3.3d the hard disk backup utility.
•FFISH300 -TitleGen v1.6 excellent script language that creates scrolling text on screen in any font and upto 500 lines long!
•FFISH213 - 300 8 colour program icons!
•FFISH168 & •FFISH169 - Matt Dillion disk special includes loads of utilities and source: Config V1.0, Clock V1.0, DME V1.31,DMouse V1.1, Backup V2.01, SUPLIB, LIBREF, DRES V1.0, DASMV2.11,FILES V1.2, SHELL V2.1, FINDIT V1.0, LIBS V1.0, SCATV1.0, ADDCR V1.0, REMCR V1.0 & CMP V1.0You need both disks.
•FAUG41 - ARC V0.2 compatible with MSDOS ARC V5.0.
•AMICUS22 - Printer Driver Generator V2.3.
•FFISH258 - DMouse v1.2 is a versatile program that includesscreen/mouse blanker, auto window activator, mouse accelerator,popcli, pop window to front, push to back etc.
•FFISH131 - DFC is a disk copier that multi-tasks.
•APDC15 - Icon utilities: full of icon files and creators. Some animated!
•APDC18 - Floppy Disk Utils: Quick Copy V1.0, Disk Mapper, DiskSalvage, Virus check, System Utils: Blitz V1.0 text editor, TimeSet,ACalc calculator Amiga Monitor V1.1, MeM Grab fast memorygrabber. Directory Master V1.1.

EDUCATION

•AMP5 - Suitable for 8's and over features: 2 excellent map drawing programs choose the Earth coordinates & it will draw the map allowing you to enter text and print or save. Evo follows the Evolution of life with skulls and maps etc. Chemistry element periodic table simply click on the chemical and a window appears showing every detail on that chemical including a picture of the crystal structure. Unit conversion is a program that allows you to choose all types of unit i.e. length, time, weight, speed etc. and then do conversions and comparisons within them e.g. Feet to millimetres a very comprehensive program. German Language will teach the basics of the German langauge. Tutor is a speak and spell tutor. Also includes Study Aid Card, Hermes Formula, Cloud, The Weather, GEO TIme, Gravity Simulator, Func2D, Gravity Well, Air Foil, Wave Maker and others. A 5 disk pack for £12.50!
•AMP6 - A new 5 disk educational pack exclusive to Public Dominator this pack is more suitable for under 8's: Colouring Book a good colouring book for young children features excellent graphics, Arc Angels Maths good maths program for children that includes graphics to aid learning, Thinga Majig puzzle program with 24 puzzles to choose from, Work and Play. 3 excellent educational programs: Funtimes table and Let's go shopping are 2 maths programs and Click Clock teaches children to tell the time. This program Requires 1MB RAM. The Word Factory, very good game enviroment for teaching spelling. A 5 disk pack for £16.50!

MUSIC

•AMP11 - 5 disk pack of Sonix files & player for £12.50!
•AMP23 - 5 disk pack of SoundTracker V3 & files £12.50!
•PDOM281 - Oktalyzer V1.1 the music composer.
•PDOM285 - GAME MUSIC CREATOR Supports MIDI.
• PDOM 299 - MED V2.13 the music editor with MIDI.

Why Public Dominator for your PD software supply?

1. We have been trading in this field for 5 years so (unlike the majority of PD libraries) we know what's what when it comes to PD, this is proven with regular orders from every corner of the globe.
2. Huge selection from over 1300 disks!
3. All disks Virus free!
4. All disks copied with verify flag on.
5. Order by telephone or post with same day dispatch.
6. Pay by Visa, Mastercard, Cheque, PO or Cash.
7. Government orders welcome.
8. Expert advice. Got a question about our software? Telephone and ask for the Technical department.

For a reliable, fast and friendly expert service try us!



The Seal of Reliability

Public Domain, Licenseware, Shareware

• PDOM 378 - Swantti of Midnight Sun Mozziax collection II: ProTracker 1, Music Editor 2, Noize Tracker 2 and 2.1, Oktalyzer, Fraxion Ripper, IntuiTracker, Disk Master 3.
• PDOM 406 - Triangle 3532 Tracker Disk V1.0: Noise Tracker 1.1, 1.2, 2.0, Star Trekker 1, Destiny 7 ripper, Fraxion Ripper,•Mega Sound Tracker 2.4, Multi Ripper 1.2, Sargon ripper 1.8, Titanics Ripper 1.1, Noise Player 3, Intuitracker 1.1, Preset editor, No Ripper, Sample selctor, sound convertor.

GAMES

Both our games packs are auto booting, menu driven, very easy to use disk packs.
•AMP8 - Game Pack 1: Clue as in Cluedo, Othello, Klondike, Canfield and Cribbage, Backgammon, Yachtc, TVision, MissleCommand, Cosmo 2 and 3D Breakout, Empire, Gravity Wars,Hanoi, Hockey, Blockoff, Jackland, Othello Master and Pacman.A 3 disk pack for £7.50!
•AMP22 - Game Pack 2: Amoeba space invaders, CosmoRoids, Stone Age a Boulder Dash type, Back Gammon, Chain Reaction, Master Mind, Reversi, Black Jack, CrazyEights, Klondike, Jig Saw, Keno, Daleks and Ratmaze,Monopoly and Escape From Jovi
V3.0. 3 disks for £7.50!
•PDOM283 - Callisto 1.01 Very tough space strategy game, Daleks 0.30, Pontoon, Puzz1.0 and World and Zerg 2 adventures.
•PSL1 - Space Blob a brilliant platform cavern game.
•PSL2 - Mr Dig, help Mr Dig collect the apples and kill the monsters. Requires 1MB.
•PSL3 - Q-Boid shoot blocks at the various random shapes decending on you, a Tetris variant.
•PSL4 - Computer Conflict excellent speech and graphics in this all action arcade game!
•ALP5 - Jungle Bungle. Requires 1MB RAM. £3.50
•ALP6 - Pukadu the game where you have to move the bug around the screen eating the tiles as you go, and Sprites 600 for you to use in your AMOS programs. £5.50
•ALP7 - 4 way Lynx the puzzle game. Requires 1MB RAM. £3.50.
•ALP11 - Go Getter. Excellent game where you have to move your ball around the course by predicting if the next number in a series will be higher or lower, excellent graphics and sound. Requires 1MB RAM. £3.50.
•AMUSE13 - Bull Run an American civil war strategy game and Gravity Attack a very good arcade game.
•AMUSE14 - Battle Mech a strategy war game between robots.
•AMUSE15 - Rocker a Lunar Lander type game, Shiva the game of Life, Cycles is a Tron light cycles type game.
•AMUSE16 - Gravity Wars a space battle game with brilliant graphics, and Larn the adventure.
•AMUSE17 - Cosmoroids an asteroids game, Tunnel Vision a graphical maze game seen from within the maze. Triclop invasion and 3D breakout that requires 3D glasses.
•AMUSE19 - Conquest the interstellar exploration game, The game of LIFE, Mile Stone the board game, Monopoly, and Trek 3 a Star Trek battle simulator.
•APDC3 - Monopoly, BackGammon, Brickout, Klondike.
•APDC4 - Tunnel Vision, Othello, Canfield, Dogstar.
•APDC8 - Shanghai, Light cycles, Othello, Life3, Conquest.
•FAUG18 - Tunnel Vision the great maze game.
•FAUG27 - Klondike the card game and Triclops the 3D planet defend game.
•FAUG30 - Hack the adventure V1.0.1E.
•FAUG52 - PACMAN 87.
•FFISH194 - Moria V3.0 the single player dungeon simulationadventure game. 1MB.
•FFISH273 - BattleForce v3.61 game.
•FFISH336 - Car V2.0 is a racing game.
•FFISH357 - Empire V2.1w is a multiplayer game of exploration, economics and war.
•FFISH62 - HACK the adventure.
•FFISH63 - LARN the adventure.
•PDOM77 - Paranoid the breakout type game.
•PDOM90 - Tennis! 1MB.
•PDOM79 & •PDOM80 & •PDOM81 - Star Trek 3 disk game by Twisted Images. 1MB. External Drive Required.
•PDOM215 & •PDOM216 - The Star Trek 2 disk game by AGATRON. Excellent animated graphic game. Brilliant game play move about the ship into all the different departments, warp speed around the universe and battle with the enemy.
•PDOM233 - The Holy Grail Adventure. 1MB. Excellent.
•PDOM234 - The Golden Fleece Adventure.

GRAPHICS

Both our graphic packs are auto booting, Work Bench driven, very easy to use disk packs.
•AMP3 Graphics Pack 1: Rot 3D a 3D drawing package, VDraw a good painting program, RayTracer, MCAD the Computer Aided Design package that works in high resolution, plus utilities: convert PrintShop to IFF, ClipIt clip any part of the screen and save as an IFF picture, HAMEdit a HAM picture editor, Window Print II will print any selected window, Show Print II will Show and/or print any IFF picture, Ushow and Autopic are 2 picture slide showers, Icon utilities: Iconize (a window), IFF2Icon and Brush2Icon converters. IFF2PCS will take an IFF picture and make it a puzzle, Filter Pix the image processing program for use with Digi View lo-res B+W pictures. A 3 disk pack for £7.50.
•AMP21 Graphics Pack 2: MSE the Mandel Brot Explorer, DBW render the ray tracing utility, FBM the image manipulation library (see disk FFISH334 below for details), ST2IFF converts Atari ST pictures to IFF, NGI allows you to read, view and reformat ILBM pictures. Pop Colours change to colour pallette on the go, DPslide, SeeILBM, Show, ShowHAM the picture showers, MACView display and convert MAC pictures to IFF, HAMEditor, IFF2Exec makes an IFF picture showable by a double click of the mouse, Some picture printers and icon utilities: Bruch2C and Brush2Icon convertors. Also some light synthesizers: Viz, Polygon and Kal. A 3 disk pack for £7.50.
•FFISH359 - ABridge An interim solution to Anim-5 incompatability problems. Identifies the origin of an Anim-5 file and modifies it to facilitate easy exchange between AniMagic, Videoscape, Animation Station, DPaint III, Editor(v1.11), The Director, SA4D, Movie2.0, Photon Paint 2.0 and Cel Animator.
•AMUSE5 - ACO Face Maker create faces in IFF format using Deluxe Paint and the supplied Face Ed V2.0.
•AMUSE34 - 39 different pointers.All absolutely excellent!
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•FFISH295 - Mandel Mountains V1.1 a Mandel Brot generator.

PROGRAMMING LANGUAGES

•PDOM211 - NORTHC v1.3 Steve Hawtins C compiler. Featurescompiler, linker, disassembler, examples and tools. An excellentCcompiler for the knowledgeable and beginner alike.
•FFISH171 - Sobozon C compiler.
•FFISH193 - ZC V1.01 C compiler.
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•FFISH351 - PD C V3.33.
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•FFISH140 - Stoney Brook PROLOG v2.3.2.
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•FFISH201 -Draco V1.2 the excellent programming language by Chris Gray. Documentation on FFISH77.
•FFISH37 - Little Smalltalk.
•FFISH91 - The Adventure Definition Language (ADL).
•FFISH337 - CManual V1.0 is a COMPLETE C manual for theAmiga. Includes 70 fully executable examples.
•FFISH339 - PCQ V1.1c Pascal compiler.
•FFISH347 - Cursor V1.0 Amiga BASIC Compiler.
•PDOM60 - Modula II compiler.
•FFISH314 - A68k v2.61 of the 68000 macro Assembler.

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Here are some examples:



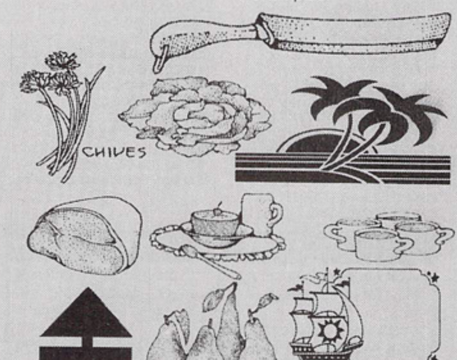
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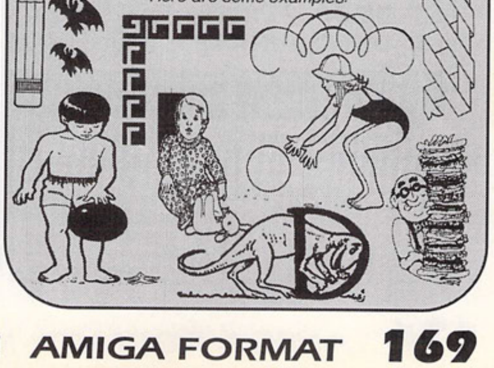
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AMIGANUTS

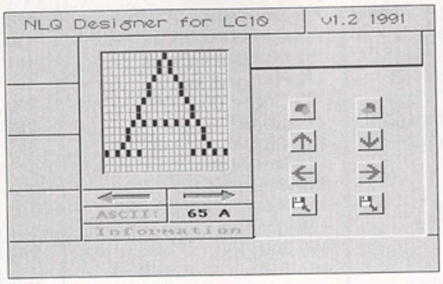
Yes, the Amiga Coders Club is still very much alive and well. Released on the second week of each month, it can prove most invaluable when you start digging into machine code and the Amiga system.

Apart from the usual source and project source listings (the ACC series is happiest when used with the *Devpac* assembler from HiSoft) there's also included a few general interest articles.

There's quite a good article on starting off in comms. It goes all the way from choosing a modem and what to look for, buying cables and obtaining software, to dialling up your first bulletin board.

On the machine code side, a couple of things which caught my attention were an article on using libraries from AmigaDOS (which tends to make your programs 'legal', ie Workbench compatible) and also a handy little information program called Helper. Helper just puts information onto the screen about certain aspects of machine-code programming. For instance, the memory map, commonly-used words, hardware addresses and so on.

LC10 FONTS
NBS



If you've ever wanted to load a set of fonts into the Star LC10 printer and tried to modify the IBM program in the manual without success, this disk is the solution.

There are a dozen or more new fonts to upload into the printer, and a program to design your own. Uploading the included fonts is very easy indeed.

The documentation is even kind enough to tell you how to set the printer up to receive them. Well done Jeff Tullin.

JUNGLE BUNGLE (1 MB)
AMOS LPD5

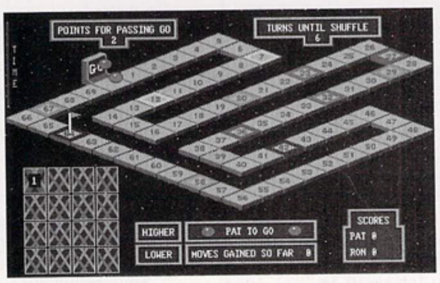
There are not many adventure games around these days. For people who enjoyed this genre, Jungle Bungle (from Len Tucker) offers a similar system but uses the Amiga's graphics and the mouse to play.

You are stranded in the middle of the jungle after an aeroplane crash. The idea of the game is to survive long enough to make your way back to civilisation – but it's not easy, because food and water are in short supply.

Moving around is done with the mouse, by clicking on one of the north, south, east or west icons. You can examine objects or search them thoroughly. Should you find anything useful it can be placed in your trusty backpack for later use.

Jungle Bungle makes a nice change from the hordes of arcade games on the Amiga. It's a very easy game to play (you rarely have to use the keyboard) but at the same time it's tricky to complete.

GO-GETTER (1 MB)
AMOS LPD11



Now here's a rarity. *Go-Getter* is an original mix of snakes-and-ladders, Hi-Lo and Amiga graphics from Ronnie Simpson. It's good to see that some people are still actually creating with AMOS these days.

Go-Getter is a two-player game. The idea is go around a board, which is displayed in 3D. The start and end squares are the same, and on the board are differently coloured squares which will teleport you to a similarly coloured square elsewhere on the board.

Moving is achieved by a deck of cards which have numbers displayed on them. You have to decide whether the next card is higher or lower – if you succeed then you can move one extra space. You keep choosing higher or lower until you make a wrong decision, which is when you move.

The trouble is, you can get miles ahead of your opponent, and then make a mistake and get teleported behind them! It's a tricky game to play well – and I really liked the idea of no dice. The cards are automatically shuffled from time to time.

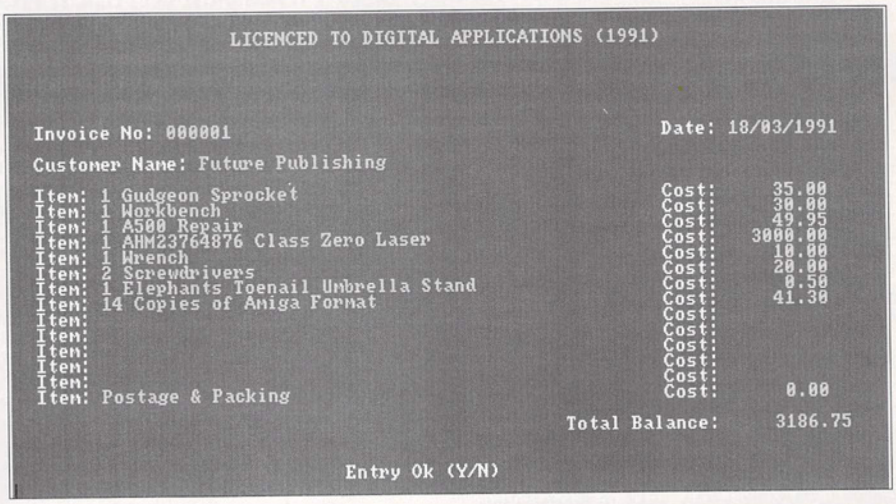
INVOICE PRINTER
DIGITAL APPLICATIONS PDXTRA 85

You've a problem. You run a small business, and you want something to print out invoices with the minimum of fuss. This program will do just that – it will accept items and their cost, total it all on-screen, add them all up and print it out to your own stationery. It's easy to use and does the job – I'm sure plenty of people will find A Marshman's little proggy very useful.

MOD PRO V1.8
AMIGANUTS 988

You've got lots of music modules handy, but they were composed with different programs (*SoundTracker, NoiseTracker, ProTracker, MED*). If you want them set up to play in the background automatically, how do do it?

MOD PRO (short for module processor) will cope with this quite happily. It has been updated, and can load different types of module – this version can cope with *ProTracker V1.1* and *MED 3.0* modules, as well as virtually everything else.It's not difficult to use, and has had most of the bugs removed from its early days. So if you want autoplaying music on your Workbench, check out this latest release.



CONTACT LIST:

AMIGANUTS, 169 Dale Valley Road, Hollybrook, Southampton, SO1 6QX. 0703 785680, **AMOS PD,** 0942 495261, **DIGITAL APPLICATIONS,** 118 Middle Crockerford, Basildon, Essex, SS16 4JA. 0268 553963, **NBS,** 132 Gunville Road, Newport, Isle of Wight, PO30 5LH. 0983 529594, **SENLAC SOFTWARE PD,** 14 Oaklea Close, Old Roar Road, St Leonards on Sea, East Sussex, TN7 7HB. 0424 445498, **UNIQUE,** 091 284 7976

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3.SID	UTL 202
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5. D-Copy	UTL 620
6. Lattice C (Fred Fish 23)	FF 1731
7. MessyDOS (Fred Fish 327)	FF 1490
8. A-Gene	MIS 632
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085 Red Sector Megademo (2)
089 Gymnast Animation *
103 Wild Copper Demo
107 RAF Megademo (2)
127 NewTek Demo (2) *
157 Cool Cougar Animation *
161 Kylie Minogue Demo (2)
240 Puggs in Space Cartoon
261 Deathstar Megademo (2)
280 Tree Frog Animation *
288 The AMOS Demo
297 Holsten Pils Ad
298 Unicycle Animation *
399 NewTek Demo 3 (2) *
447 Micro Mix Demo
483 Elvira Demo
499 Showbiz Animation *
568 Wings Animation
574 Laurel & Hardy Demo (2)
577 Lumberjack Song (2)
646 Predators Megademo (2)
711 Arcadia Megademo
744 Red Sector Cebit Demo
747 Popeye Meets Beachboys
762 The Run Animation *
771 Congaman Animation *
773 Shark Animation *
821 Popeye Demo / Game
825 Budbrain Megademo (X)(2)
853 Dragons Lair Demo *
854 Bread/Home & Away Demo
865 Coma Demo
881 Flash Megademo (2)
895 Trip To Mars
897 Scoopex Mental Hangover
903 Shadow of Beast 2 Demo
906 Madonna Cartoon *
944 Magnetic Fields CD Demo
946 Subway Clapping Hands

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045 Golden Fleece Adventure
068 Adventures Disk 1
117 Monopoly
121 Stone Age
135 Classic Board/Card Games
151 Chinese Chequers *
172 Flaschbier Game
195 Electric Train Set
219 Tennis *
251 Blizzard
314 Breakout Construction Set
315 Return to Earth
496 Holy Grail Adventure *
498 Wanderer Game
500 Star Fleet
567 Turrican Playable Demo
648 Star Trek (USA) (2) *
680 Learn & Play (2)
689 Eat Mine
690 Marathon Mine 3
727 Star Trek (Richter) (2)
766 Treasure Hunt (Age 6-10)
823 Pseudo Cop Game
938 Computer Conflict
957 Pipeline
962 Drip!
987 Snakepit
991 Jeopard *
1004 Games Disk 9
1084 S.E.U.C.K. Games
1091 Entropy
1113 Wet Beaver Games
1230 Dragon Cave
1245 Rings of Zon *
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1411 APD62: Arcadia
1434 APD85: Reversi / Snakes
1445 APD96: Pair-It

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081 UEdit Word Processor
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111 Grafix Utilities 1
118 Grafix Utilities 2
119 Amiga MCAD
152 Virus Killers Disk
180 Pagesetter Clip Art
210 Icons!
259 Ultimate Bootblock Coll. (2)
343 Intromaker
346 TV Graphics (2)
348 APDC 25 (Programming)
353 ShoWiz 2.0
354 PowerPacker 2.2a
380 PD Spectacular
410 DPaint Cartoon Brushes
442 DPaint Fonts Disks (4)
456 Chet Solace Extravaganza
458 HAM Radio Special (5)
495 ClickDOS (CLI Helper)
516 A68k Assembler/C Compiler
536 Red Devil Compacting Utils.
537 Red Devil Utilities Disk 3
542 Awesome Utilities
546 Iconmania!
571 Jazzbench
580 Dope Intro Maker
591 Business Card Maker
595 Amateur Radio Disk
632 MessyDOS
633 Analyticalc
642 C Manual
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645 North C
661 Programming Disk
682 Sound Applications (2)
684 Video Applications (2)
697 Graphics Management (2)
901 THE Comms Disk

MUSIC DISKS

022 Sound Atax
044 Batdance Remix
052 Awesome Sounds
061 J M Jarre - Definitive
166 Vangelis *
187 Crusaders Audio X
237 Zee's Hip Hop Music Disk
267 Miami Vice Remix
313 Relaxation Disk
335 Girls Need Love
398 Powerlords: Power Musix 1
407 CD Player *
409 Crusaders: Freakd Out!
424 Made in Heaven (2)
426 Ripping Yarns
497 Amiga Chart 5
518 Bopus Polupus
534 Vision Music Masters
552 Music Invasion 3 (2)
650 MAD: Nuls for Ever
654 Powerlords Power Musix 2
713 Flash! - Queen (2)
722 Beatmaster Club Mix
724 Technotronic Remix
746 Crusaders Bacteria
824 Digital Concert V
833 DJ Disco Leif 2
857 900 / Oxygene Remix *
866 Pan III Music Disk
870 Bruno's Music Box 2
910 Darkling Lords Music Disk
914 Special Brothers Music 2
922 Phalanx Beatbox
924 Game Boy Music Disk *
930 Rebellion
935 Madonna: Hanky Panky
941 Soundtracker Jukebox
959 Scorpions : Eargasm II
969 100 C64 Games Tunes
970 The Comic Strip Remix
976 Scoopex: Beast Sonix
982 E & L: Get Up!
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993 PSA Music Demodisk 1
1026 Digital Concert VI
1061 Captured Imagination
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954 Teenage Turtles Demo
964 Operation Vark!
966 Bloodsport 2
1001 Station at Khern ** (3)
1008 APD22: Fun School 3 Demo
1033 At the Movies **
1034 Stealthy *
1043 Razor 1911: Vertical Insanity
1053 Not 9 O'Clock News 3 (2)
1064 Dream Warrior Demos
1072 Rebels Tuttie Fruitie Pak II
1088 Epic Demo *
1089 Not 9 O'Clock News 4 (2) *
1092 Pharaoh Animation *
1093 DPaint 3 Demo (2) *
1105 Crionics Neverwhere Demo
1108 Looney Tunes Animation *
1110 Fractal Flight
1188 Fillet The Fish
1190 Pussy : Innership
1191 Clothes Peg Animation *
1200 Raiders of Lost Ark Anim *
1214 Anarchy Scratch Pack 44
1226 Wizzcat Trashcan Demo
1229 Budbrain 2
1231 Awesome Game Demo
1235 Kickboxer Demo
1236 Rebels Tutti Fruitie VII
1238 Evil Dead Demo (X) *
1246 LSD: Comix Disk 1
1256 Killing Game Show Demo
1271 Legend of Billy The Kid *
1275 Penguin Animations
1280 Horizon: Sleeping Bag
1287 Wrath of the Demon Demo
1400 APD51: Weird Science
1453 More Aerotoons *

SLIDESHOWS

078 Vallejo Fantasy Art (2)
082 Ray-traced Pictures
163 NASA Slideshow
167 Digiview Slideshow
171 Patrick Nagel Pictures
185 Escher Slideshow
238 TV Sports Basketball
282 Forgotten Realms
617 Neighbours Slideshow
725 Diggy Piggys Slideshow (2)
742 Madonna Slideshow
767 Cinemaware Slideshow
768 Action!
814 Viz Slideshow
831 Utopia Cartoon Slideshow
863 Scream Queens (2)
878 Sun Connection: Slide 3
891 Creepshow
899 Madonna Slideshow 2 (2) *
942 Garfield Slideshow
968 Gorezone Slideshow (X)
1044 Desert Island Slideshow 2
1051 Total Recall Slideshow
1062 Golems Gate Slideshow
1073 Fraxion Fantasy Slideshow
1082 Annie Jones Slideshow
1085 Comic Slideshow (X)
1103 Girls of Sports Illustrated
1112 Fractal Factory 3
1210 Turtles Slideshow
1211 Fractal Fantasy
1232 Jimi Hendrix Slideshow
1242 Back to the Future
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PD Demo Zone



The chocolate egg stomach from Easter is still plaguing you. You're too ill to move. You want some entertainment but don't feel up to stepping out of the house. Also, all those sweets have eaten a large chunk out of your savings. What on Earth can you do about this sorry situation? Simple! Follow the critical advice of **Maff Evans** and go get hold of some of those wonderfully entertaining PD Demos!

ZERO HOUR MODEL DISK 3

17-BIT DISK 840

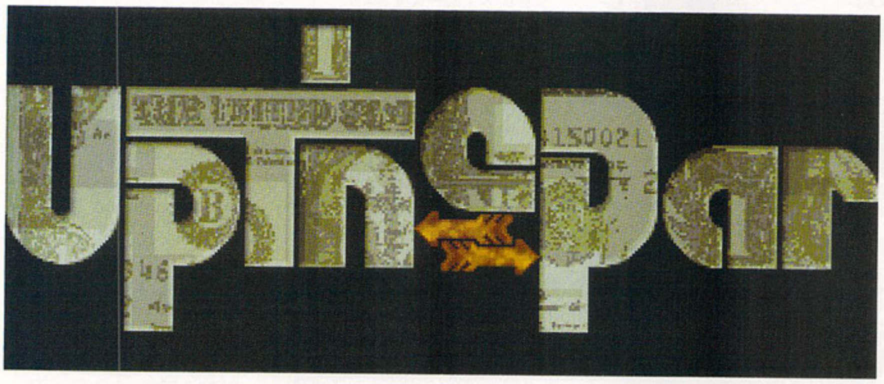
Some pretty girls have had their features HAM digitised for this slideshow, which includes frames from various fashion magazines, as well as the swimsuit edition of *Sports Illustrated*. The quality ranges from pretty rough to fairly impressive, but it makes quite a nice break from the eye-stabbing graphics for a while.



VOCAL ATTACK III

DOZSOFT DS036 AND DS037

Some more serious grooves, ranging from heavy acid via Latino House to a nice A Tribe Called Quest-style rendition of Walk on the Wild Side (if you don't know what I mean, take a listen to the catchy 'Can I Kick It' by said artistes). The graphics are pretty run-of-the-mill, apart from the nice logos constructed with pieces of dollar bills, but the music is well worth checking out.



THE SPICE MUSIC DEMO

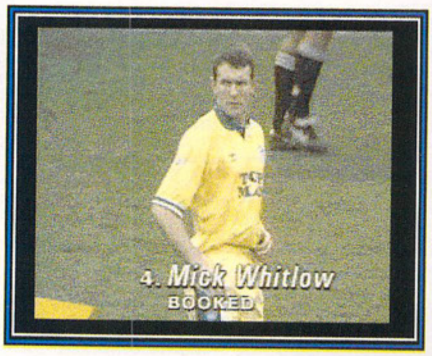
SOFTVILLE PD DISK SOF-742

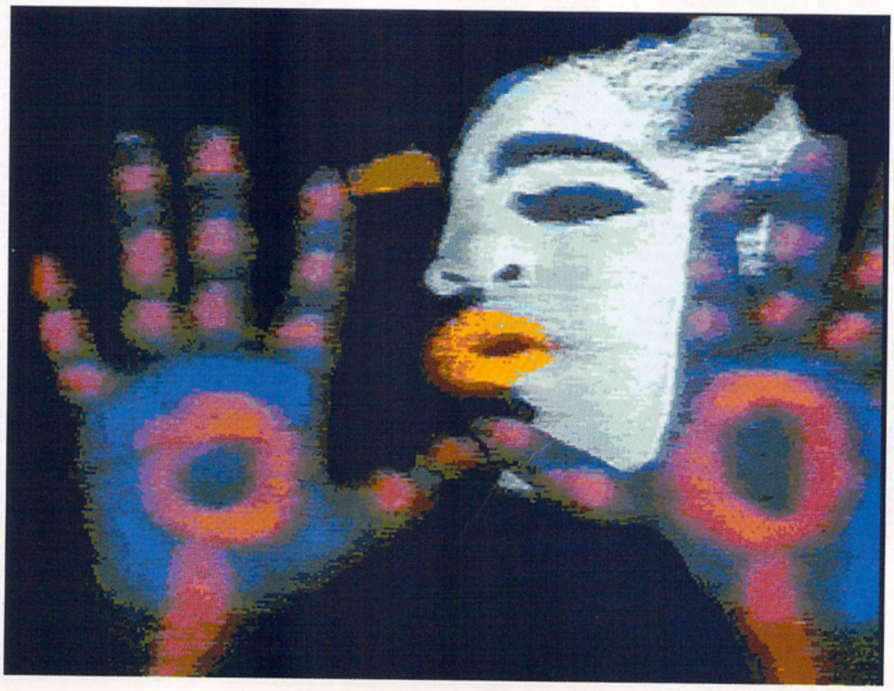
If you can ignore the rather twee Edd the Duck animations at the bottom of the screen, this demo shows once again that Hacktrick are a force to be reckoned with when it comes to nasty dance music. The demo contrasts the evil 'Mr Kirk's Nightmare' with the more ethereal 'There Can be Only One'. Some of the better PD grooves to appear for a while.

LEEDS UNITED SLIDESHOW

17-BIT DISK 845

This has to be one of the silliest ideas for a slideshow so far! I know that there have been demos with limited appeal, but this is ridiculous. Some digitised HAM images from *The Big Match* is pretty much yer lot, so only complete Leeds United fans need apply.





GAMES DOMAIN P.D.

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GAMES PACK # 2
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GAMES PACK # 3
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GAMES PACK # 4
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DEMOS

D001 Walker 1 (1 meg). A classic Animation.
D002 Walker 2 (1 meg). Cool Animation.
D003 Walker 3 (1 meg). Nice pair of legs.
D004 Cool Cougar (1 meg). Cartoon quality animation.
D028 Budbrain Megademo (2 disks). Totaly amazing.
D059 Red Sector Megademo (2 disks). One of the best.
D077 Good Morning Vietnam. Good long sample.
D088 Silents Megademo. Very impressive.
D134 Garfield Demo. Cool piccy's of Garfy.
D147 Neighbours Slideshow. Hilarious.
D150 Windsurfer Anims (2 disks/1 meg). Very good.
D153 EPIC Game Demo (1 meg). Amazing, lasts for ages
D160 Exodus Real 3D. Wicked pics.
D169 Budbrain Megademo 2. Well 'ard.
D187 Batman The Movie (1 meg). Cool sound & Anim.
D190 Iraq Demo. Very good and funny.
D194 Prologic PARTY Time. Good long demo.
D205 Walker 1 anim (2 MEG, 2 disks) The original classic.
D206 Walker 2 anim (2 meg, 2 disks). Another big one.
D207 Drunken Skulls a Equamania 2. Cool GFX & music.
D209 Tron the light cycles (2 disks 1 Meg) Long & amazing.
D217 Slycath Demo Comp 1. 5 cool demos
D222 Magnetic Fields Hysteresis. Totally Fab! Get it!
D223 Advance ham invasion. The best pics on an Amiga!
D224 Anarchy System Violator. Mega cool demo!
D225 Slycath Demo Comp 2. 5 amazing demos

MUSIC

M002 Roger Ramjet Remix. Very good & long.
M011 D-Mob 2. Cool & funky music.
M012 D-Mob 4 (2 disks). More cool music.
M026 Amiga Chart Mix 5. Nice beaty stuff.
M029 D-Mob Music 3. Cool long music mix.
M033 Derek & Clive (2 disks). Very funny, Get it!
M034 Total Remix (2 disks) UZI 9mm. Funny.
M035 Digital Concert 2. Wicked music mix
M036 Digital Concert 3. Our favourite.
M037 Digital Concert 4. Another good one.
M038 Digital Concert 5. Cool.
M039 Digital Concert 6. Very good mix.
M049 Ben Elton (XXX). Very funny.
M064 Sound Atax 2. 10 cool bits of music.
M070 Scoopex's Shadow of the beast music. Cool
M075 100 C64 Tunes. Nice music.
M112 Jarre Revolutions. Check it out!
M114 Betty Boo! Just doing the do!
M125 R.A.F. Megamix 2 (2 disks) Very good and long
M134 Miami Vice Theme (4 disks) ER.very, very long.
M138 The Simpsons. Do the Bartman (3 disks) Cool.
M141 Dirty Dancing. Very good sample.
M143 Twin Peaks Theme. Good.
M152 Prologic music 6. 5 cool tunes.

UTILITIES

U002 UEDIT WORD PROCESSOR. Good.
U004 Soundtracker collection (3 disks). Very good.
U010 Ghost Writer & Rainbow Writer. Demo makers.
U014 Flexybase. Good Database.
U020 Dope Intro Maker. Make your own demos.
U021 Ultimate Icon Disk. Loads of Icons & Editors.
U024 S.I.D CLI Utility. Amazing Cli tool, very useful.
U037 Med V2.01. Good music maker.
U039 Amibase V3.76. Very good database.
U047 Jazzbench. Much better workbench.
U048 V.C. Spreadsheet. Very good.
U062 Ultimate Copier & Virus Killer Disk. Loads of copiers.
U063 Clip Art. Animals, cartoon, misc, People & Zodiac.
U064 More Clip Art, buildings, Xmas, transport & misc.
U065 Pagesetter Clip Art. Loads of art on all topics.
U066 C-Light. (1 meg). Very good.
U069 North C 1.3 (2 disks). Latest version.
U070 Pascal PCQ 1.1. Cool pascal stuff.
U071 Rippers, 45 music rippers on 1 big value disk.

GAMES

G001 Star Trek 3 (2 disks). The best P.D. game
G008 Board Games, Monopoly etc etc.
G010 Wheel of fortune. Good game.
G016 Tennis (1 meg). Good game includes speech
G017 Pseudo Cop Game. ED 209
G019 Paranoid. Good breakout clone.

COMPETITIONS LAST MONTH **AMIGA ONLY**

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These are brief descriptions, disks may contain much more.

GAMES

UGAME1 - COSMAROIDS, ROLLERBALL, ORBIT 3D & LADYBUG
UGAME2 - FLASCHBIER, 250 frantic levels!
UGAME3 - LINGO, BALLY, NIGHTWORKS
SOF68 - CLASSIC card/Board games
SOF78 - PACMAN, the all time classic
SOF117 - EMPIRE, GRAVWARS, HANOI, etc
SOF118 - GRAVATTACK, BULLRUN, WORLD
SOF396 - TENNIS, shareware vers (1meg)
SOF501 - (2disks £5)STARTREK, brilliant PD version. (1meg, 2drives)
SOF530 - SkyFight, Bleed, (not v1.3.7)
FF357 - EMPIRE, new version multi-player game. Keyboard or modem
FF347 - DRIP arcade style game, . Good!
FF320 - AMIOMEGA, similar to Hack
FF312 - CHINACHALLENGE, shanghai game, MOONBASE lunar lander.
FF259 - Escape From Jovi, fast action game, multi-levels.

PICTURES

SOF20 - NASA DIGI-VIEW slides 14 pics.
SOF79 - SAM FOX SLIDESHOW, in her usual state of dress!
SOF90 - Boris Vallengo's FANTASY PICS 3
SOF108 - PAGE3 PICTURES, Selection of good digitised pics.
SOF147 - FANTASY pictures, these are the BEST you'll see!
SOF149 - THE ADVENTURE CONTINUES, slideshow of the SpaceShuttle
SOF197 - BARBARIAN ladies, fabulously drawn pictures.
FF196 - the absolute BEST scanned pic's you'll ever see!

LANGUAGES

FF351 - PDC, publicly distributable C, complete system
FF347 - CURSOR, 3pass AmigaBASIC compiler
FF340 - NORTHC, C environment based on SozobonC.
FF339 - PCQ, self compiling PASCAL compiler.
FF337 - CMANUAL, complete C manual & 70 source examples.
FF314 - A68K, assembler, ZC, C compiler complete.
FF247 - ASSEMTOOLS, 140 routines for asembley programmers.
FF140 - StoneyBrook PROLOG - needs both disks (below)
FF141 - Disk two of above.
SOF184 - MODULA2 compiler, complete with documentation.
SOF549 - ARP 1.3, complete with full documentation.
APDC25 - FORTH, MODULA2, LISP & LOGO

MUSIC & MIDI

SOF10 - MIDIutil, MIDI2, PAN1.2, CZ101, CZL + DMCS MIDI songs
SOF11 - Hundreds of new instruments for CZ synths.
SOF262 - 2disks - Noise/Soundtracker set
FF349 - MED V2, Musical editor - very good

CLASSIC DEMONSTRATIONS

SOF3 - Fred the Baker, Roses Flower Shop.
SOF7 - THE PROBE shown on TV!
SOF34 - ROCKER, KAHNANKAS, BERSERK
SOF70 - BOING!, SPROING!, JUGGLER, TILT
SOF154 - EL GATO, RED BARON, (1meg)
SOF219 - 2 disk, 2meg version of the WALKER demo (£5)
SOF254 - 1meg version WALKER demo
SOF255 - 1meg version of WALKER2.
SOF414 - PUGGS IN SPACE, cute animation very well done
SOF546 - FRACTAL FLIGHT, (1meg)
SOF467 - NEWTEK demo reel3, new production (2disks/drives, 1meg £5)

UTILITIES & TEXT HANDLERS

FF375 - TEXTPLUS word processor
FF328 - ANALYTICALC for numerical analysis, includes spreadsheet etc.
SOF500 - 7disk set of CLIP ART (£15)
FF315 - AMIGAFOX, text processor with graphic facilities.
FF228 - JAZZBENCH multi-tasking wbench.
FF210 - CALC, scientific/programmer calc
APDC23 - Word processor, 2 spell checkers, 4 databases.
SOF15 - CLIP ART DISK for pagesetter
SOF17 - Ray Tracing Construction Set
SOF21 - CLIP ART DISK for Pagesetter
PAN48 - WORDWRIGHT word processor
SOF123 - MCAD, amiga CAD program
SOF126 - UEDIT, manipulate your files in
SOF169 - Cosmopolitan FONTS for Dpaint
SOF170 - FANCY FONTS as above
SOF171 - PUBLISHERS FONTS as above
SOF172 - VARIOUS FONTS as above
SOF191 - ARENDER v3, ray trace package
SOF240 - CHET SOLACE DISK, 26 utilities

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DO THE BARTMAN
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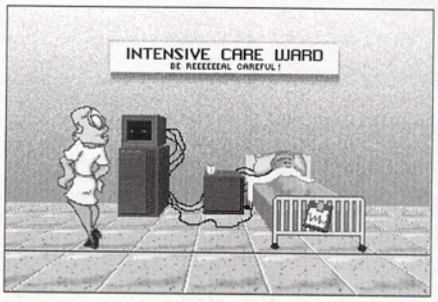
Well, you can love him or hate him, but he's just about around everywhere you look. Who you ask? That infamous under-achiever Bart Simpson.

If you're a fan of that yellow-coloured spike-topped hooligan then you'll probably be interested in number four in the Hard Music series, since it is a sampled rendition of young Master Simpson's haunting theme 'Do the Bartman'. And what a pleasant, wholesome tune it is (not too sure about that one).



CATCHPHRASE DEMO
ARC DISK D118

Now you can enjoy one of the tackiest quiz shows on Earth with your Amiga! Boot up the disk, hear Roy Walker himself introduce the game and try to guess the catchphrases! Hours of fun ... if you're stupid!





TERMINAL
UNIQUE COMPUTING DISK AN-024

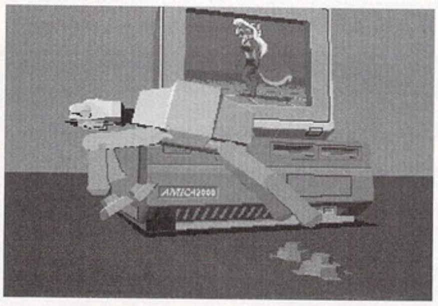
Eric Schwartz, famous for his series of 'Stealthy' animations, has come up with something a little more risque. Terminal is in the usual Schwartz style, showing an extremely ill patient's troubles with technology. Not for those with a sensitive sense of humour.

MISS MA'M'SELLE CARTOON
UNIQUE COMPUTING DISK AM-064

Another Eric Schwartz creation, featuring more of those wonderfully animated cartoon creatures. The clip tells the tale of a delegation out on a visit to Miss Ma'm'selle, only to be reduced to quivering heaps before her charismatic charm. Short, but nicely executed.

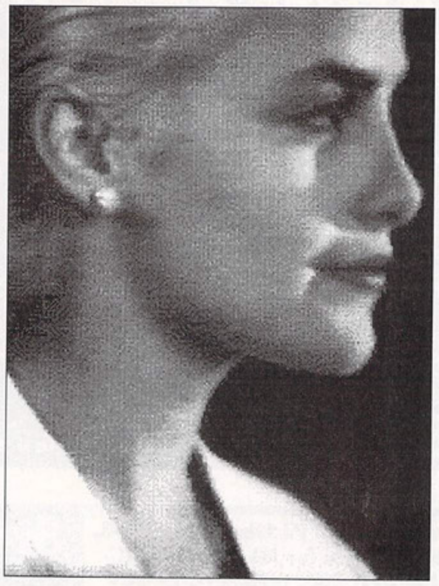
AMY VS. THE WALKER
NBS

Eric Schwartz scores his hat trick with this amusing little clip. This time the cartoon stars Amy from the *'At the Movies'* demo chasing the not-so-fearful AT-AT with a large spanner ... say no more! You will need a fair amount of memory to enjoy the whole thing, but it's worth it just for a laugh.



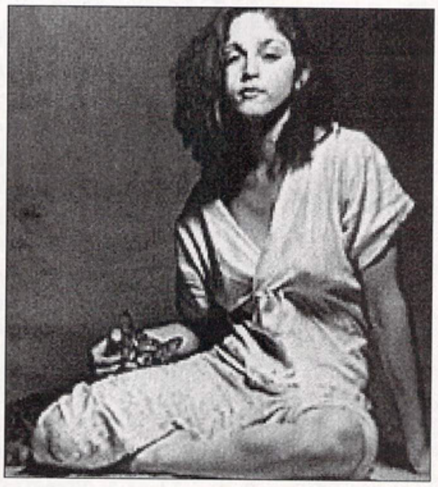
FENN-TASTIC VOLUME III
17-BIT DISK 848

The third in this series of slideshows continues in the same vein as the previous two. The disk consists of a selection of HAM pictures digitised from various screen appearances by Miss Sherilyn Fenn, from a selection of films via *Twin Peaks* to *The Word*. The demo itself isn't a massively interesting program, but no doubt the large number of *Twin Peaks* and Sherilyn fans will want to add it to their collection.



MADONNA SLIDESHOW
17-BIT DISK 850





This one's a bit on the dubious side. The demo features black-and-white digitised images of Ms Ciccone from a certain publication. We'd like to point out that this disk is certainly NOT for family consumption!

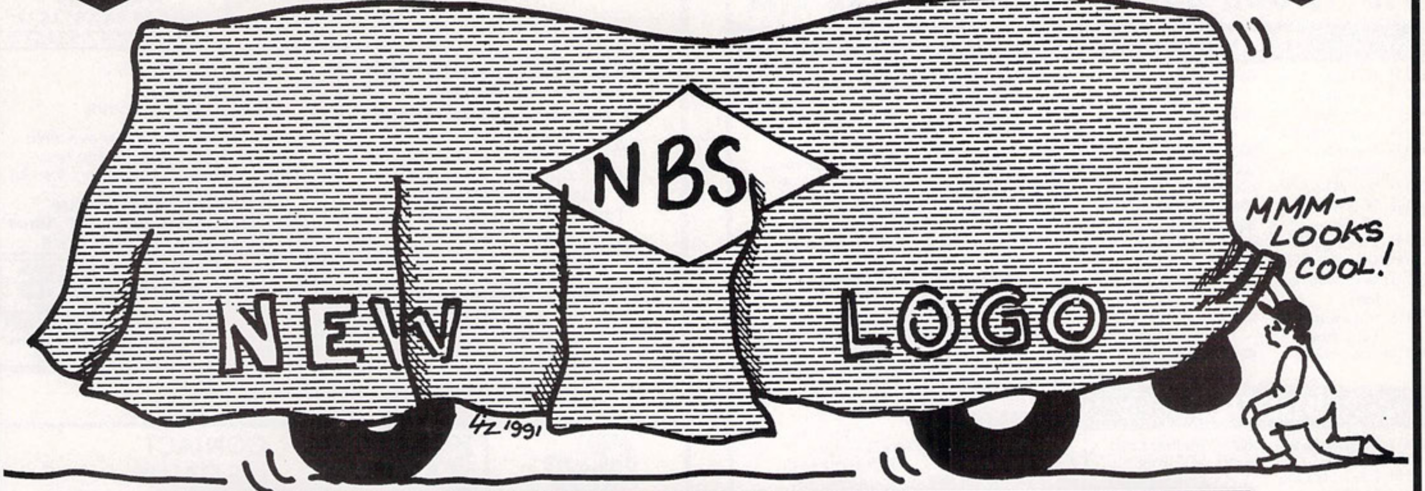
CONTACT LIST:

ARC PD, 1 Northlands, Potters Bar, Herts EN6 5DF. **DOZSOFT**, 32 Benedict Drive, Bedfont, Feltham, Middx TW14 8JL. **17-BIT SOFTWARE**, PO Box 97, Wakefield, West Yorks WF1 1XX. Tel-0924 366 982. **UNIQUE COMPUTING**, 114 Salters Road, Gosforth, Newcastle-Upon-Tyne NE3 3UP. Tel-091 284 7676. **VIRUS FREE PD**, 23 Elborough Road, Moredon, Swindon, Wilts SN2 2LS.

TOP TEN DEMOS
RIVERDENE PD LIBRARY

1. Amazing Tunes 2	DEM 692/3/4
2. Budbrain 2	DEM 696
3. Stealthy 2	ART 692
4. Tioal Recall	DEM 714
5. Amaze Music	DEM 586
6. Fraxxion Horror	DEM 617
7. 100 C64 Tunes	DEM 664
8. Digital Concert 6	DEM 614
9. Depeche Mode	DEM 587
10. Sounds of Knome	DEM 39

NBS PUBLIC DOMAIN LIBRARY NBS



NEW AMIGA OWNERS START HERE

WHAT IS PUBLIC DOMAIN SOFTWARE?

Public domain software comes from 2 main sources. The first is where someone has written a useful little utility, which is of use to the writer and hence almost certainly of use to other Amiga users, but has no commercial value. The second is from enthusiastic Amiga owners who just love to show off their coding prowess, possibly to impress their mates, to prove to a software house their ability to code graphics, or just give pleasure to thousands of other Amiga enthusiasts. In the early days, much of the PD left a lot to be desired, but these days there are many fantastic utilities, games and demos which, at a nominal cost can bring many hours of pleasure, and there is now a veritable army of PD collectors. All true PD is without copyright and can be freely copied and used as you want, providing you adhere to any conditions stated on the disk. PD distributors should not make a profit on the disk, but charge on the service they provide. NBS provides one of the best and most helpful services available today, but please don't take my word for it, try us! If you have just acquired your Amiga, we recommend the following disks, which will either amaze, amuse, or be very useful. NBS disks are divided into the following groups:

D = Demos, M = Music, P = Requires 2 meg or more, G = Games, U = Utilities, E = Educational

D 146 RSI MEGADEMO. One of the best ever demo disks (2 DISKS)
D 153 PUGGS IN SPACE. A brilliant cartoon demo, yet to be bettered.
D 180 SCOOPEX MENTAL HANGOVER Brill Music and graphics
D 186 COMA DEMO. Flashy acid demo, together with more great demos *
D 190 RSI CEBIT DEMO. Terrific demo, with the best ever music *
D 033 TOMSOFT TRIP TO MARS. Vector graphics with a theme *
D 091 FILLET THE FISH Similar to PUGGS, but not as good, still brill.
D 315 UNREAL DEMO A game demo to show off some great graphics.
X 110 FRAXION HORROR Great cartoon graphic demo of nasty stuff.
M 005 MAHONEY & KAKTUS Brilliant music disk
M 030 DIGITAL CONCERT 2: Over 12 mins of mixed house music.
M 070 CRUSADERS BACTERIA Stunning sound and graphics.
M 170 NEWTRONS MUSIC DISK 'HEADBANGER' You will not believe this!!
G 107 STAR TREK GAME Good graphic adventure, Best with 1 meg (2 disks)

NBS GROWING BIGGER BY BEING BETTER!

G 109 BLIZZARD Good horizontal Shoot 'em Up.
G 133 PD GAMES COMPO Good selection inc Welltrix and Breakout.
G 136 DRIP Very tricky painter type game. Almost commercial quality!
G 137 THE TURN and TRICKY A couple of good puzzle games by Peter Handel.
G 138 MARBLE SLIDE A cross between Pipemania and sliding blocks. Great!!
U 220 SID A good utility to take the hard work out of CLI.
U 222 NBS SPEEDBENCH A faster loading workbench, plus some handy utilities.
U 225 AMIBASE A good database. Start a disk catalogue now.
U 226 RAZOR TOOLDISK A comprehensive set of mixed utilities, inc Virus Killers, copier, disc fixers. Not all for novices!
U233 UEDIT Good Public Domain Wordprocessor.
D 034 BUDBRAIN MEGADEMO. Our No1 title! Fantastic and funny, but contains some X-rated cartoons....may offend! (2 disks)

*** Compilation disks which contain other demos requiring 1 Meg of memory.**

LATEST & GREATEST PD LIST

D 220 PAH! SIMPLE STUFF VOL 2 - NBS Demo compo inc crusaders cinefex; great
D 221 PAH! SIMPLE STUFF 3....Dragons Lair, TimeWarp demo and more
D 222 CRIONICS TOTAL DESTRUCTION (1 MEG)....Some great effects.
D 223 BUDBRAIN MEGADEMO 2....Very popular at the recent show.
D 225 HORIZON MEGADEMO (1 MEG)....Includes best ray traced anim ever?
D 236 GOLDFIRE ULTIMATE FX....This group continues to improve!!
D 240 CRUSADERS EUROCHART - JAN 91.....Now needs a disk to itself
D 241 ANGELS MEGADEMO.....Good but not mega
D 242 3-D DEMOS....Get out your 3-D glasses and CHECK THESE OUT!
D 243 KEFRENS - THE WALL.....Great intro! Good graffix, then so so
D 244 PAH! SIMPLE STUFF 4 Latest Great demos inc.Cardamon (1 meg)
D 245 PAH! SIMPLE STUFF 5 Special compilation: Demos with great music
D 246 PAH! SIMPLE STUFF 6 Special compilation: Copper & Plasma FX
D 247 PAH! SIMPLE STUFF 7 Special compilation: Fractal demos
D 250 ANARCHY MADNESS 2 Good graphics and superb music by 4-Mat
D 251 CRYSTALS OF ARBOREA Game demo of new Palace graphic adventure
D 252 DEMONIAC GAME DEMO Game demo from Palace. Nice graphics
D 377 NEWTEK DYNAMIC HI-RES SLIDESHOW (1 MEG)...piccys from the ads.
D 381 FRAXION FANTASY SLIDESHOW....Great presentation, great piccys.
D 388/9 BETTY BOO.....Doing The Do (2 disk set)
D 386 BLOODSPORT SLIDESHOW....For oriental sports fans!
D 390 LIVE CORRUPTION-NAPALM DEATH SLIDESHOW.....Heavy!.
D 393/4/5 DEFINATIVE MADONNA SLIDESHOW...(3 disks) 1 meg & 2 drives
D 545 JET FIGHTER ANIM...Similar to The Run, but far far better (1 MEG)
D 546 AGATRON ANIM 10... Enterprise leaving dock. Superb (1 MEG)
D 547 STEVE'S ANIM No 1...Some super little anims. Have a look.
D 548 STEVE'S ANIM No 2...More cute little anims. I love 'em.
D 549 AGATRON ANIM FLEET MANOEUVRE (1 MEG)...Tobias best yet. Very impressive.
D 555 BATMAN THE MOVIE ANIMATION (1 MEG)....Good funny cartoon movie!
D 559 MAGICIAN AND JOGGER ANIMATIONS (1 MEG)....Ray traced anims.
D 560 CAR & UNICYCLE ANIMATION (1 MEG)....Brill anim, a must for fans!
D 561 STEVE'S ANIMS 3 (1 MEG)....More of these cute litte anims
D 562 STEVE'S ANIMS 4 (1 MEG)....From Steve Packer.. (as featured
D 563 STEVE'S ANIMS 5 (1 MEG)...last month.)
D 564 EVIL DEAD DEMO (1 MEG).. Get the goulies, before they get yours
D 565 RGB & FOCUS (1 MEG)....The famous 'stretching nose' animation!
D 570/1 TRON ANIMATION (1 MEG 2 DISKS) Great anim based upon the film
D 572 FRANKLYN THE FLY (1 MEG)...Simple but effective and funny.. Good
D 573 TOO MUCH 3D (1 MEG)....The spaceship flies out of the screen!
D 576 IRAQ DEMO Amusing animation of what might have been
D 577 MORE AEROTOONS More in the series of Stealthy cartoons
D 578 ROBOCOP ANIMATION You have 15 seconds to comply etc. In Colour
D 579 MORE CLASSY ANIMATIONS More cute anims from Steve Packer
D 582 BATTLE CHESS DEMO Great game demo (even if you cannot play chess)

POWER DEMOS (All demos in this section require loads of memory)

P 001/2 WALKER DEMO 1 (2 MEG 2 DISKS)
P 003/4 WALKER DEMO 2 (2 MEG 2 DISKS)
P 005/6/7 LOST IN SPACE (2 MEG 3 DISKS)
P 008/9 THE SENTINAL (3 MEG 2 DISKS)
P 019/20 VAUX KILLER (2.5 MEG 2 DISKS) ...OK but not brill anim
P 021-026 UPGRADE 1.5 MEG 2 DRIVES 6 yes 6 disks!!!) multi part anim
P 010/11 HEADKICK ANIM (2 MEG 2 DISKS plus HARD-DRIVE)
P 012/3/4 STATION AT KHERN (2 MEG 3 DISKS)
P 030/1 DRAGONS LAIR 2 GAME DEMO Superb (3 MEG, 2 DISKS)
P 032/3/4 BUZZED Great Ray traced anim (2 MEG, 3 DISKS)
P 035/6/7/8 AUTOMATED LIGHT (BATTLESTAR GALACTICA) (3 MEG, 4 DISKS)

MUSIC

M 200/1/2 SAE AMAZING TUNES 2 (3 DISKS 1 MEG)...Superb! Showstopper.
M 212 MAG FIELDS CHIP FESTIVAL....Another huge collection.
M 230 DEXION PARTY MUSIC AND PICCYS....A good disk as always
M 231 CRUSADERS DOES GENESIS (1 MEG)...Brill, fab, great, GET IT!!!!!
M 232 ALCATRAZ MUZIC......Classy presentation, 3 good tracks!!!
M 239 PHENOMENA MUSIC 17 tracks and a good play screen
M 240 POWERTRAX BY NWI 3 tunes. Mainly chart samples and ok.

UTILITIES

U 103 ULTIMATE VIRUS KILLER..Updated now knows 105 viruses
U 220 SID-THE ULTIMATE CLI UTILITY...That's what it says!
U 262 A-GENE (FAMILY TREE) (1 MEG)....Trace your history.
U 266 C-LIGHT (1 MEG)...Recently praised ray tracing util. (why pay more?)
U 267 ELECTROCAD DEMO (1 MEG) Circuit diagram design tool. No save in demo.
U 283 SLIDESHOW CONSTRUCTION KIT.... Put your digi piccy in a slideshow.
U 289 BIORHYTHMS (1 MEG) Do you feel good today? This will tell you!
U 294/5 MANDELBROT PACK A great collection of Mandel and Fractal progs
U 306-U312 Clip Art...Collection of clip art for DTP etc.
U 505 to U508 SOUNDTRACKER SAMPLE DISKS....Instrument disks.
U 509 SOUNDTRACKER SAMPLE DISK (BEATS BREAKS)...Great for house tracks!

GAMES

G 142 PD GAMES COMPO 3....Great Pacman plus 2 others.
G 143 JEOPARDY (1 MEG)....Version of the board game Risk!
G 152 PD GAMES COMPO 9....Battlemech, Bullrun (Battle Sim) and more
G 155 SUBCULTURE GAME DEMO..."Privateware' Level 1 of a good horizontal silky smooth, machine coded, scrolling shoot em up. If you like the game, buy from author!
G 159 ANTEP (1 MEG)....RPG also SLOTS, a good car chase game.
STARTERS PACK 1....Games, demos, utils...11 disks + free box £9.99
STARTERS PACK 2....11 disks selection of PD games + free box £9.99
G 199 SEVEN TITLES Speedball clone, get it or miss out.

EDUCATION

E 006/7 LEARN AND PLAY....Games plus maths and words (kids aged 5+)
E 008 TALKING COLOURING BOOK.....Draw the pictures then colour them
More educational disks in the AMOS LICENCEWARE Collection

FISH, T-BAG, AND AMOS DISKS

NEW IN: Latest FISH DISKS up to 450 plus updated FISH index disk (AQUARIUM)with full descriptions of new disks. Ask for 'Aquarium 450' also latest AMOS LICENCEWARE. Some great games and educational disks, and selected AMOS Public Domain up to disk 137. T-BAG disks up to disk 46 (or more??) also available.

With so many disks in our library it is impossible to list them all here. We have many new disks coming in every day, so if you see a disk featured in these pages, and we don't list it, give us a call.

NEED MORE DETAILS: **NBS PD UPDATE 6 IS NOW AVAILABLE!** To obtain your copy, please send a stamped self-addressed envelope (min size 9" x 6")and 50p. Pah! you say, why should I send 50p? Because its more than just a list. Each new disk in the library has been given a full review, plus the magazine part of the catalogue contains: hints and tips, articles, win a colour monitor and 5 memory upgrades, and much more. We wanted

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512K Ram Upgrades........................£35.00
Mouse mats (soft, boxed)........................£2.65
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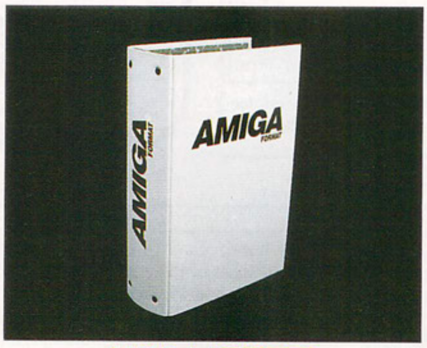
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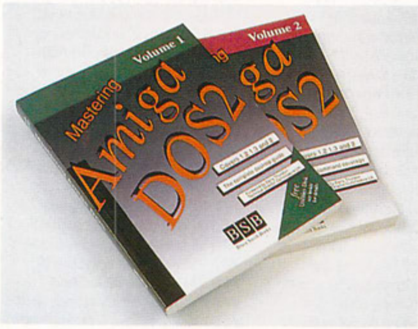


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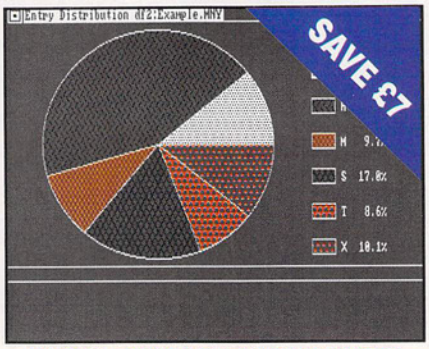
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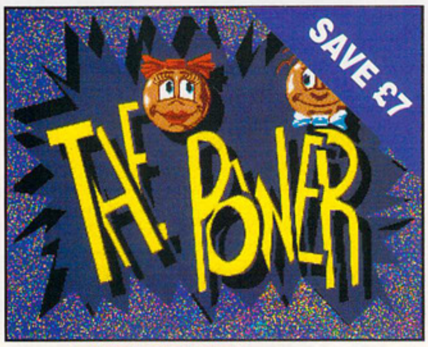
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Workbench

A bumper edition of the finest technical tips yet published for the Amiga, with **PAT McDONALD** in the hotseat.

COMMS QUERY

I need to transfer a machine code program from a different computer into my Amiga via the serial port. I want it to end up as a byte-for-byte replica in a file.

Setting up the remote machine is easy but I'm having problems at the Amiga end. When I read the serial port from Amiga Basic it seems that INPUT #1,a$ tries to get a line of data and not a byte. Although INPUT$(1,#1) reads in single bytes it stops when it encounters the code for CTRL-C.

Is it possible to read machine code from the serial port and copy it to a file from Basic? I resorted to Basic because NComm V1.9's ASCII capture mode keeps getting 11K of the data instead of the full 16K.

Sean Eaton, Surbiton

It is possible, but a bit tricky. What you have to do on the transmitting mission is modify the data so that the CTRL-C character doesn't get transmitted.

One way to do this is to transmit the data half a byte at a time, shifted four bits to the left. That way the data will range in value from 32 to 255, so that CTRL-C isn't sent. On the Amiga you would then have to shift all the data down and add bits together.

Alternatively, you could use NCommV1.9 and send the data in two 8K blocks rather than one 16K block. You might consider buying a memory upgrade, which will allow you much more buffer space for files. Can't you get a communications program for the transmitting computer that works with a protocol like XModem? Then it would be a snap.

QUESTIONS AND QUESTIONS

1: What is a hard card?
2: What is the difference between a hard drive and a hard card?
3: If I bought a hard drive would I need a special controller for it?
4: Do Commodore make a hard drive with a much greater capacity than 20MB?
5: When is Workbench 1.4 coming out, or is it going to be called 2.0?
6: I have a 1.2 machine with an original Fat Agnus chip. What is the serial number – 8367, 8371 or 8372?
7: How much can I expect to pay for a Fatter Agnus chip?
8: Does Commodore or anybody else offer a part exchange for my old Fat Agnus?
9: When is the series on building your own hardware beginning?
10: I plugged my printer into my computer whilst it was turned on and now my printer just prints garbage. What is most likely to be the matter?

S Jackson, North Yorkshire

1: *A combined hard drive controller and hard drive unit on a standard expansion card for the A1500, A2000 or A3000.*
2: *A hard drive is a disk mechanism which needs a controller. A hard card has this controller built on. Most products advertised as hard drives have controllers, manuals and software with them: that is, they are hard drive units with all the necessary bits to use them.*
3: *Usually, no. Hard drive units without controllers are not easy to get hold of – they are usually sold in bulk to companies who assemble them into complete solutions for the general public, such as the many advertised in AF.*
4: *Err ... for which machine? If you mean the A500 then no, otherwise yes. You can get drives for the A500 with more capacity from third party suppliers (that means those companies who are not Commodore).*
5: *A tentative launch date is June, but I cannot say for sure, and yes, it's definitely Workbench 2.*
6: *8671.*
7: *About £60.*
8: *I have not personally heard of anyone who does.*
9: *It probably won't be a series as such, just the occasional one off article. Anybody with a project should send it to me – I've had some suggestions but would appreciate many more.*
10: *Either the printer or your Amiga has blown a chip. Try the printer on a different computer – if it works then you will need to get your Amiga fixed if you want to use it for printing.*

INTERLACE GONE

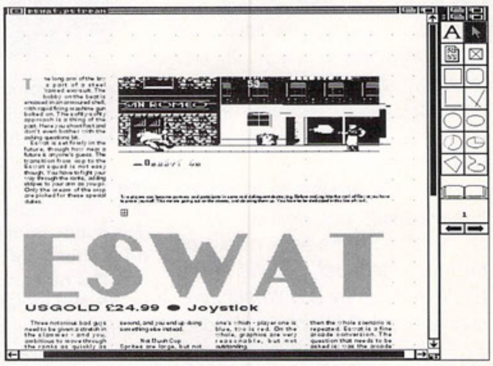
PRIZE WINNER

If you use *PageStream 2* and don't like using it in interlace mode, there is a simple way around the problem. Once the disk has booted, but before you've double-clicked on the program icon to run it, click once on it – to highlight the icon – press the right hand button and keep it pressed, move the mouse pointer to the top left of the screen and select info from the menu that comes down. You can let go of the button now.

The icons information screen will come up. Under tool types, click on the down arrow until the words "Interlace=Yes" appear. Change this to "Interlace=No" and click on the save option. This works on version *2.1* of the software, so I'm unsure whether your review of *2.0* was correct when it said that the program always runs in interlace.

Mike Deakin, Wirral

I regret to say that our copy of* PageStream 2.0 *has been corrupted, and that we are unable to test it. I suspect however that this will work on 2.0 – should it not the few owners who have 2.0 will be happier getting themselves an upgrade to 2.1, in which case they won't have to put up with the flickery interlace mode.



COMMAND RAM

Here is a tip for all the single-drive Amiga owners who use the CLI or Shell rather a lot and want to avoid disk swapping. Please note that it only works on Workbench 1.3 and you should have at least 1 MB of memory.

The problem with using the CLI is that the program usually expects all the commands to be on the Workbench disk. The only snag is that if you are playing around with a separate disk you must insert the Workbench disk to get at the c directory (where all the commands are kept).

First, load Workbench and open up the Shell or CLI. Then type the following commands:

```
COPY df0:c to ram:c
path ram:c add
```

This copies all the commands into the RAM disk (which will cut down on the amount of RAM available for other uses) and then informs AmigaDOS where to look for the commands, that is in the c directory of the RAM disk. Note that this directory is created automatically by the first command.

David Jacob, Hillingdon

That's all right if you've got a fair amount of extra memory, but I wouldn't recommend readers with unexpanded A500s using it.

Continued overleaf ▸

VIDEO SHOPPING

I am considering buying a VCR in the coming months and would like to ask a very simple question before lashing out the cash. As well as catching all the Clint movies off the telly, I'd like to have a go at making an animation sequence from the Amiga. The query arises thus – do I need a special mega-expensive super turbo-charged video with extra special buttons and twiddly knobs, or just any old Curry's job?

Also, I purchased *DBW Render* and found the pictures fantastic. The on-disk documentation said that there may be an object editor for it one day. Have you heard anything about this? At the minute I have to render the picture to see what it looks like, and it's very time consuming.

T A Seaman, New Malden

It depends on whether you want to do some serious frame-by-frame editing or whether you just want to record an animation as it plays. If you go for the latter and just use any video you will be limited to short animations which fit into memory, and there will be an annoying glitch between animations. In this case any video recorder will do.

If you're thinking of producing a feature-length movie then I'd recommend reading a book or two on desktop video first. I found Amiga Desktop Video by Guy Wright informative if a bit American. It costs £18.45, is published by Abacus, has ISBN1-55755-057-3, and is imported in this country by Computer Bookshops Ltd (021 706 1188).

I regret that I have no details to hand of a DBW Render editor. Has anyone else?

NO BACKUP

1: I have recently bought an A590 hard drive for my 1 MB A500. The manual is just not comprehensive enough. I want to know how to copy commercial software such as flight simulations onto it. Could you please tell me how to do this in a concise, clear manner. I use a PC at work and have no problems at all with its hard drive.

2: I have recently been given to me an Amstrad LQ3500di printer. Can it be used with my Amiga, and if this is so which printer driver should I select?

3: I would like my external floppy drive cable to be a bit longer. I've tried making one myself and even bought a 23-pin cable, but neither worked, much to my wallet's disgust. Is there a cable out there that will do the job?

Mark Sellars, Salisbury

1: *I'm very surprised – the documentation which comes with nearly all flight sims usually states this, if it is possible without considerable difficulty. If the documentation doesn't state how to do it then the simulation probably won't work with a hard drive anyway.*

Games generally are not happy working with hard drives. An awful lot more programs are not happy with the A590 in particular (see Workbench AF18 for the cure). The reason I cannot give you a simple step-by-step guide is because there isn't one – either a game will go on a hard drive using the instructions or it will go on to a hard disk with considerable (in some cases titanic) modification.

As a final note, I've had a word with Trenton and he reckons it will be no problem to say whether or not a game's instructions tell you how to put the game onto hard drives. So keep an eye on future reviews, but do bear in mind that sometimes we don't see the final instructions...

2: *Yes it can. The Epson LQ driver does the job for the 3500di in our office.*

3: *This is not a smart move at all. If you make the cables longer, the low voltages used by external drives mean power loss. Can't you live with a shorter cable? You will find your electricity bills will be a smidgen smaller. Apart from that, I am afraid I have not come across such a cable.*

EXPERIENCE COUNTS

PRIZE WINNER

To reply to your reply to AS Caldwell's letter in *AF*20 in which he asked a few questions concerning 5.25-inch drives. I'm afraid you managed to get most of the answers wrong.

To begin with most of the Amiga-specific drives don't need the mount command in the startup-sequence as the system automatically recognises their existence and designates it as either df1:, df2: or df3: depending on the 5.25-inch drive's position in the daisy chain.

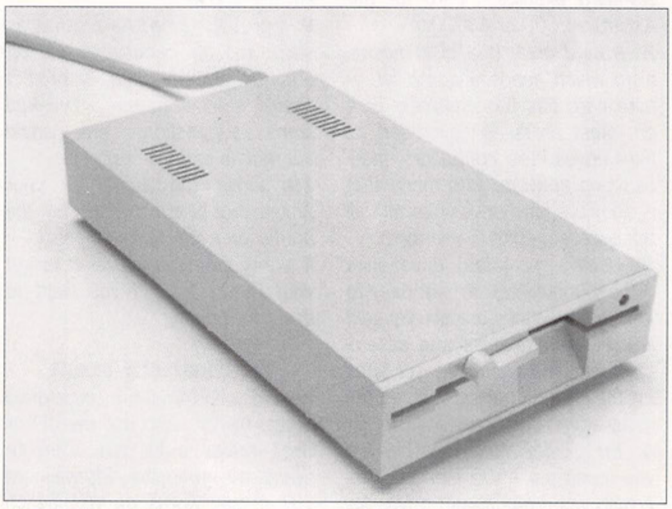
"Not a chance" to the question "Will I be able to boot up my computer from this external drive" was a bit harsh. There are two ways of doing this. The simplest and cheapest is a software switch, such as the excellent public domain program *Bootselect*. This allows you to boot from any drive after a soft reset and works very well.

The other option is a hardware switch, some of which are advertised in *AF*. For about £8 these little devices allow you to switch more permanently between drives, and it doesn't need a hard reset to swap between boot drives. However a bit of technical skill is needed to fit one.

And last, to utilise a 5.25-inch drive with Transformer it just has to be there. Transformer designates any drives attached as PC drives A:, B: or C:. It's as easy as that.

I hope this helps AS Caldwell as by no means all technically-minded Amiga owners are "mean and horrible to their fellow, if not so technically minded Amiga owners". I'd also like to suggest that the techie whiz-kids who think it's all right to spread viruses to lamers only should remember that they were lamers once.

David Sawkins, Boddam



Shows the difference between somebody who has actually used Transformer with a 5.25-inch disk drive (you) and someone who hasn't (me). Thanks very much for the info and we'll be doing our best to acquaint ourselves further with this area in the near future.

GHOST TEXT

Please can you tell me how to get rid of infuriating and unwanted characters that get printed at the top-right of the screen when I am using *KindWords*. I don't get them when printing with *PageSetter* or *Notepad*. They take the form of P, PP, PPP or KPP (preceded by a club character). I have an A500 with an A501 memory expansion and a Star LC200 printer.

Trevor McAvoy, Worcester

Errm... no. Any offers from KindWords users?

SINE WAVES

Here is a small tip for people with sound samplers. If you want to get a sine wave, then connect the sampler to a stereo or a TV headphone socket and then adjust the volume.

Depending on how HiFi your system is (the worse, the better!) you should be able to pick up and digitise the hum as a perfect sine wave. Mathematicians will appreciate that by mixing sine waves of different amplitudes other waveforms can be generated.

Miles Willmott, Matlock

Thanks matey.

DEMO WRITING

I have taken AmigaBASIC as far as it can go. I need a new programming language. There are a few options available, such as C, AMOS and an assembler. Which one would be the best for me? I would like to begin by trying to emulate the demos I see in the public domain. I am quite experienced with a number of languages, some of which were quite complex. Before I forget, are there any good books around on any of the above topics? I can read, by the way.

Gerard Miles, Ruislip

The main problem with programming the Amiga to get ultra-good graphics and sound is not necessarily the programming language – it's how well the language ties into the machine.

AMOS is very good in that you can create some excellent effects from a BASIC language very quickly indeed, but the actual programs do not run as fast as their compiled (C or assembler) equivalents. For starting off it's very good, but if you are really plunging into the machine you will need to use C or assembler.

C has some advantages (easier and faster to code, easier debugging) over assembler. PD demo writers do not use it though

Continued on Page 189

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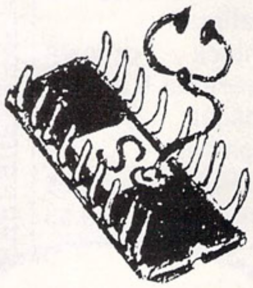
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OLDER RIBBONS

PRIZE WINNER

Do you want to double the life of your Star LC10 printer ribbons (and possibly others)? After removing the cartridge from the machine I noticed that only the bottom half of the ribbon was showing signs of use.

By turning the take-up knob on the cartridge in the direction of the arrow, note the slot that the ribbon comes out from (slot A) and the slot it enters (slot B). Now pull out all the ribbon from slot A.

Close to slot A, put a half twist in the ribbon and by turning the knob in the opposite direction, feed the ribbon into the cartridge (keeping a slight tension on it to keep the twist in place) so that the twist exits at slot B.

Remove the twist and rewind all of the the tape back into the cartridge by turning the knob in the direction of the arrow. You should now have successfully managed to turn the ribbon upside down, allowing the unused half to be used. Once you have done this you will find it neither as complicated or as messy as it may seem.

If you have friends who are not AF readers, you can rummage through their dustbins for their old ribbons so that you never need to buy a new ribbon again. Well, you can never be too careful with that hard-earned dosh!

P J Shaw, Bletchingley

I quite agree – I use it with my printer ribbons to squeeze the most out of them.

– they hit hardware directly with machine code routines rather than the standard programming libraries so beloved of C coders, break standard programming rules, ignore the operating system and generally run riot with the machine's capabilities. Which is why PD demos look so good.

Do be aware of the purpose of PD demos. They are programming demonstrations of graphical effects, and have no material value. You sound more of the 'method' school of programming, in which case I'd recommend learning about the Amiga using C as a starting point – you will find it more restrictive following the rules but once you know what you are doing, your programs will probably work.

Plunging straight into assembler actually seems easier than C at first, because you make up your own rules. What you tend to find, though, is that the graphical manipulation is easy, but the routine housekeeping is a pain to write. You get bogged down with details and larger programs which do something worthwhile and are much harder to program using pure machine code than C.

Remember that you can easily incorporate specific machine code routines within C programs, and that the speed difference is not major unless you are playing around with rather high-speed moving graphics.

BEST PRESENTED

I have been asked to produce a number of graphical presentations for my company. These are a reasonable colour-screen definition, good sound quality with a few snatches of sampled speech and, most importantly, easy to run finished productions – the end users though, will be very vague about computers.

I considered using my desktop computer (which is an IBM 386) but sound and ease of use were not too good. On the verge of spending lots of money on new hardware I discussed the problem with my son. He suggested using his computer, the Commodore Amiga, which I had mentally relegated to being just a "video games machine".

He showed me a program called *Deluxe Video* and a few samples of his work using this. He suggested that I borrow the machine for a few days to try it out. Within a week I had presentations that exceeded the original specification given to me.

The company is more than satisfied with the capabilities of the Amiga, but the hard drive that my son has is quite small at only 20MB. While the machine has full access to an amazing (by IBM standards) 3MB of RAM, with larger productions even this can be restrictive when a lot of sampled speech is used. I would like a slightly faster processor since the standard one is a little sluggish by the standards of today.

On discussing these matters at work, I have been given a budget of £4500 for the computer and software. While this sounds a lot at the outset, on browsing through a number of magazines related to the subject, I have found that to convert an IBM PC or Apple Macintosh to the required specification would cost a hell of a lot more.

My son tells me that there are other models of Amigas available with more memory, faster processors and larger hard disks, and that Commodore themselves are producing some 'Multimedia' software. Perhaps you could run through these options for me (doubtless some of your readers are in the dark too) and a brief explanation of Multimedia wouldn't go amiss.

N Monro, Kings Langley

Please, one thing before reading the reply to your letter: give your son his Amiga back! I'm sure he is missing it a lot.

Multimedia means, simply enough, many different forms of information. It's the concept whereby you can access text, graphics and sounds digitally and display them with a computer. By making decisions with a mouse or touch screen, you can race around the information and learn about your specialist subject at your own speed and convenience.

Nowadays the Amiga comes in four varieties. The machine that you have been looking at sounds like an A500, the "home" version. This has much the same circuitry and is virtually compatible with the larger B2000. The difference is that the A500 is not easily expandable: the B2000 has a separate keyboard with the computer in a box, and there is lots of space inside for expansion cards.

The A1500 is a cosmetically changed version with another internal drive, but should be thought of as a B2000.

All the above computers generally share the same specification. Maximum memory capacity is 9MB of RAM, which is all usable by the computer. Up to four floppy drives (3.5-inch or 5.25-inch) can be used at once. And 20MB is the smallest size of hard drive – the average is 40MB, with capacities going up to 300MB in some cases.

Faster processors are available – these are in the form of cards which plug into the existing processor slot, with the faster processor on the card. Usually the standard processor sits in the card too, so as to give a "fall back" capability when you run software that doesn't much like being accelerated.

The fourth Amiga is the A3000. This is a professional desktop model, with a built-in faster accelerator, better graphics modes, no limit on RAM expansion, and that's more or less all I can say: Commodore still haven't sent us one for review. but it could be the ideal thing for your needs, coming in at a good deal less than your budget and with all the extras as standard.

One thing that is important: a lot of current Amiga software won't work with the A3000, so you should check that the software that you want to use does work with with it (always pick your software before your hardware).

L PLATE

My friend and I are very keen on learning how to program in C. I have seen various public domain versions of C (notably PDC and NorthC) and I was wondering if you could say if they are any good for beginners. Also could you recommend to me any good books on the subject?

R Radley, Tonbridge

I've not seen PDC, but NorthC is good. Anders Bjerin has written a C Manual (widely available in the public domain) which can help get you started – he also runs a C coders club.

Books tend to cater for the commercial and costly Lattice C V5, sometimes referred to as SAS C. The best one for beginners is probably Amiga C for Beginners bu Dirk Schaun, published by Abacus at £17.95, ISBN 1-55755-045-X. This can be used with Aztec C too and is available from Computer Bookshops Ltd (021 706 1188).

Continued on Page190 ▸

Workbench Silly Questions

A new section in Workbench, in which we try to answer some of the simpler and more obvious points that can so easily confuse the beginner.

EX-SPECCY-OWNERS CORNER

EX-SPECTRUM USER 1

Please could you tell me how I would set about writing my own startup-sequences. I have the program *NewZap* which I find very useful for changing and adapting ASCII and hexadecimal files, but with this you are unable to start with a clean slate and write. I wonder whether you would be able to give me some advice as to what to do or what programs I should buy.

I also have a few queries about *Vidi-Amiga.* If I bought it would I be able to take colour video frames straight from a video recorder and is there a choice as to whether you save in IFF or HAM mode?

Is there a Spectrum emulator around, and if there is where would I find one?

Ian Francis, Coulsdon

Your problem is that you are editing the current startup-sequence. What you need to do is edit a file that doesn't exist – those programs will then start a new file for you to write in. You can then rename the file to s/startup-sequence.

If you don't know how to use Rename, then you probably need to know more about AmigaDOS commands, in which case I recommend that you buy a copy of Mastering AmigaDOS 2 Volume 1 by Mark Smiddy.

No, because* Vidi-Amiga *doesn't take colour. If you want colour then you will need* Vidi-Chrome *and* Vidi-RGB *as well, plus your video recorder must have a crystal-clear freeze frame. Pictures are normally saved in HAM format, which is what the pictures are grabbed in using* Vidi-Chrome. Vidi-Amiga *uses IFF. Again, if you check the feature on Page 23 you should learn all you need to know.

The new commercial Spectrum emulator is nearly finished, but I'm afraid it doesn't have a UK importer yet.

EX-SPECTRUM USER 2

Over the past eight years I programmed the – dare I say it? – ZX Specturm in BASIC. Now I've got an Amiga and I am just starting to get to grips with it, but there are a few questions I'd like answered.

When I have written my program (in AmigaBASIC) how do I make it "Auto Booting", that is, run as soon as the disk is inserted. At the moment I have to load Workbench, then AmigaBASIC, then the program – it's so tedious at the moment.

Do I have to assemble it to C? I find the manual about as useful as a Tetley condom so would appreciate any information at all. Are there any books that you would recommend?

Craig P McCormick, Bristol

Amiga Basic does not have a compiler (software that turns a high level language into machine code). You're stiffed. Buy a decent Basic with a compiler – check out GFA Basic, Power Basic (by Hisoft) or AMOS Basic (which doesn't have a compiler yet but soon will have).

EX-SPECTRUM USER 3

I have owned an A500 for just over a year now. I have upgraded it to 1MB of memory with two disk drives, and now I'm thinking about connecting a printer to it. I know I can buy a Star LC10 for something under £150, but that's how short cash actually is.

My previous computer was a ZX Spectrum and that had a dedicated printer for it (Seikosha GP505). Is it possible to convert this printer for use with my Amiga?

P R Bywaters, Luton

There's not a cat in hell's chance. Start saving your pennies.

UNORIGINAL

Is it at all possible for my A500 to put photographs onto disk, so as to be viewed on a monitor? I really fancy having a go, as it would make a first class photo album.

A Grice-Roberts, Blackpool

Yes.

Oh, you want to know how! Right, first off you need the method of reading images. You can use a video camera and a video digitiser (that's the clever bit that plugs into the back of your computer). Digitisers cost about £100 upwards, and will read images from any still video signal.

So you get your video camera plugged into the digitiser, point it at the photograph ... Hang on for just one minute, why don't you turn to Page 23 and read the digitiser round-up in this issue.

CONCLUSION JUMPER

I would be pleased if you could answer my question. Why don't some of my games work with a fatter Agnus? I recently bought an A500 and was very disappointed to find that almost a dozen of my games don't work on it.

What exactly is a fatter Agnus? Can I get it taken out and have a normal Agnus put in? Also is there a relatively cheap way of getting pictures digitised into my computer? Or do I have to buy expensive video equipment?

Alastair Roden, Hailsham

How do you know that the problems lie with the fatter Agnus chip? Yes, you can have it removed and a normal one put in – contact Ace Repairs (0503 20282). Relatively cheap means little when dealing with video/digitising. You pay the money and get the product. Is £150 for DigiView Gold too much? If it is for you then it's not cheap, but if you're used to spending £3000 on a video camera then it's very cheap indeed.

PAIN IN THE...

Could you please tell me why my Workbench doesn't work. I have nothing but problems. Double-clicking rarely works. I have to double click on an icon or drawer, then remove the disk for a few seconds and insert it again to get anything to open.

The drag bars on windows will operate as will the sizing gadgets but if I try moving icons or drawers by dragging them (move the pointer to the top of the icon, press left button, move mouse, release button) then I have to take out the disk and reboot. And it works then.

As you can probably guess this is a constant pain in the Workbench. Could it be because my Amiga has a 1.2 Kickstart ROM chip and the Workbench is the 1.3 version? Or is it my mouse?

What is a read/write error? Can anything be done about them? What is a validating error?

F P Coldwell, Castleford

Erm... I wish I could tell you more, but diagnosing this fault is a little bit difficult without seeing your problem ourselves. Very likely it is the 1.2 Kickstart chip not liking Workbench 1.3 – but I really couldn't say for sure, because our 1.2 machine has temporarily died so I can't check it myself.

One thing I can say for sure is that using Workbench 1.3 with a Kickstart 1.3 is a relatively painless operation compared to the agony you are suffering, so I do recommend that you upgrade your Kickstart chip to 1.3.

The reason this makes a difference is that the Kickstart chip loads the basics of the operating system as soon as you switch on your machine. What you're doing is using a 1.2 operating system with a 1.3 Workbench program, which is bound to cause problems.

Read/Write and Validating errors are caused when a disk screws up. Consult your manual on using DiskDoctor to salvage the information from the bad disk. Then copy it to a new disk and bin the old one.

OH DEAR

I have a revision 6 A500 with an extra half MB fitted. Some time ago I modified the motherboard so I could have 1MB of chip memory, for

Continued on Page 192 ▸

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extra big screens with lots of colours. The problem is that the MS-DOS emulator Transformer doesn't work. Also the animation menu in *Deluxe Paint III* is ghosted out and can't be used. Is this because there is no fast memory anymore, or is it because of another hardware fault?

If I buy another internal expansion board with 1.5MB or more on it, can I then use my Transformer and animate in *DPaint III* and still have 1MB of chip memory for extra large resolution pictures with lots of colours?

J Hoogendoorn, The Netherlands

Yes, it's because you don't have any fast memory any more. If you get a bigger memory expansion that should do the trick. Readers should only upgrade their machine if they need a lot of chip memory, ie they want to run programs which actually need it.

WHO KNOWS?

At the moment I am using an A500 with a half MB upgrade and an old type Cumana CAX354 second drive. I hope to be expanding it with an ATOnce PC emulator, a 1.5 MB RAM expansion and a 5.25 inch floppy drive. Will the Amiga power supply be able to cope with that lot?

D Hardy, Hull

Possibly. The only way to know for sure is to buy all the equipment and try it. Maybe you had better buy a replacement power supply from WTS just to be on the safe side.

IT'S BROKEN

Please do not ignore this letter yet again. I am in need of a lot of help about my RAM expansion. Let me refer back to *AF16*, where you did a whole article on memory expansions. I read it with eagerness, because I wanted to play games like *It Came From The Desert* and use the *Pen Pal* program.

I bought the Ashcom expansion (which you said was the best). After plugging it in and switching on, I loaded *It Came From The Desert*. It loaded perfectly but there were a lot of thick yellow lines on the screen.

I've tried other programs, none of which work properly. Some of them cause Guru Meditation numbers to appear – just what are these? I've upgraded the machine from Kickstart 1.2 to 1.3 but the results are no better. I've tried the memory expansion in a friend's machine and it worked. What is wrong?

Gerard Wilmot, Winsford

It's obvious – your Amiga is up the spout as far as expansions go. Get it repaired.

OBVIOUS REALLY

I want to produce video graphics using the A500. All I really need is something which has a good selection of stylish fonts producing characters up to about 25mm high on a medium resolution screen. The advertised software is not clear on fonts but seems to push other, more dynamic features. Could you suggest something at (hopefully) a reasonable price?

At the moment I have *DPaint III* and *Photon Paint*. Can Dean Agar suggest some uses for *DPaint III*'s animated brush option in perhaps a future Masterclass?

Pete Fensome, Manchester

Why don't you load in different fonts to the programs that you already own? There are hundreds of different fonts in the public domain, so start checking with local PD libraries about them.

STRANGE FIX

I know that you won't print this because if you do you'll get lots of letters reporting broken Amigas. Just for the record I believe that this tip is the best yet.

It happened to me. I put a disk in and the disk drive made one awful noise. The hand holding the disk came up on the screen again. I switched my computer off for a minute, switched it back on and tried again. The same thing happened.

"Virus!" I thought. I disconnected my RAM expansion with the clock on it and switched off for another half-an-hour before trying again – to get the same result. So I sat and thought.

I came up with the idea that the head in the disk drive was locked in the top of the drive. I disconnected all the leads from the computer, stood on my bed and dropped the computer onto the bed three times. Obviously any chips would be pushed down into their sockets rather than popping out.

I plugged in the computer and switched on. All my disks now load perfectly and I've had no more problems. I hope this tip may fix some Amigas that would otherwise spend some time at the Commodore Repair Centre.

Is there any connection between putting disks near a television and read/write errors?

J Latham, Wigan

Well, if your Amiga is already dead, I can't see why you shouldn't try and resuscitate it with this bizarre method. Do make sure that the landing pad is nice and soft. 99,999 times out of 100,000 it won't work but you never know...

Putting a disk near a magnetic field (such as those generated by TV sets) can cause read/write errors, so always keep them away from sources of magnetism.

VERY NEW READER

I am considering buying a 512K upgrade for my A500 and have noticed some companies offering a fastmem/chipmem option. It states that if you have an A500 with the fatter Agnus chip you can – with a simple soldering job – use the chipmem option.

1: What is chipmem, and what are its advantages if any?
2: What is fastmem?
3: How do I know if my A500 has the fatter Agnus chip without opening it up?

K D Brown, Dukinfield

***1:** Chipmem, short for chip memory, is memory that both the processor (68000) and custom chips (Paula, Agnus, Denise) can communicate with. It is used for storing samples and all the graphics screens, as well as programs and data (in unexpanded Amigas).*
***2:** Fastmem, short for fast memory, is memory that only the processor can talk to. Because it never clashes with the custom chips the processor is never stopped when accessing it: but if any graphics or sounds are stored here, the processor has to copy them into chip memory before they can be played or displayed.*
***3:** Run the Vectacheck program (Coverdisk 15)*

NO NO NO

I can get a 4MB RAM chip for £50. It is CMOS and is surface mountable. My freaky computer friend, Robert Summers, says that it would have to be programmed to my Amiga. What does he mean? Is it possible, and how much would it cost?

My cat Scooby Doo has found that after I've finished with the computer it is very warm and cosy. I think because of his moulting fur my internal disk drive is broken. It loads everything fine, but when I go to change disks (like on *Xenon 2* or *Lords of the Rising Sun*) a system message jumps in like a Guru lookalike saying "Please replace any volume in DF0:". It then loads the second disk but it is getting on my nerves!

Tim Long, Taunton

What Mr Summers means is that the chip has to be interfaced: that is, connected correctly to the Amiga. Double buffering and auto configuration would be nice too: if you don't understand how to do this then leave the chip on the shop shelf.

No, your drive is not broken. It can't take out the first disk, pick up the second disk and insert it into the floppy drive on its own can it? So it asks you to do this. If it really annoys you, buy a second disk drive (which some games totally ignore!)

MIXED COLOURS

I want a printer for our A500 (which has incidentally been boosted up to 1000 meg). So we got a black-and-white printer and had no problems but we also got *Paintbox 2* software: both myself and my sister wanted our pictures to come out in colour. So we bought a colour printer and it's causing problems...

It's putting red dots throughout all colours and putting red lines across yellow colours. We were naturally very worried about this and so wrote to the printer company who informed us that it is the software.

We have been all through the booklets and manuals and cannot find anything compatible about the computer. We have tried several ways: we can't put the same printout through *Paintbox 2* twice – it's set to Epson/JX/88. We are desperate for information.

As we are new to computers we do not know where to seek this information. We have tried everywhere possible – please can you help? Any information would be useful.

Jennine Stanley, Barnsley

1000 Meg Amiga huh? Are you sure? That's £20,000 plus worth of memory, plus it must be a weird and wonderful wiring job.

As for your printing problem, it's because what you see as yellow does indeed contain a bit of red. The printer doesn't know any better – it's trying to make 4096 colours from just four, so you would expect a certain amount of mixing wouldn't you?

There's a company called Care Electronics (0923 672102) who are selling a program called Flexidump for £39.95. This is especially set up to print out colour pictures, and I can even do T-shirt prints. Pretty soon they hope to release a colour mapped version, which will print out colours perfectly. This should help you to get good results and they can also help you with some advice.

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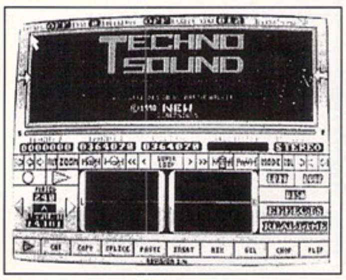
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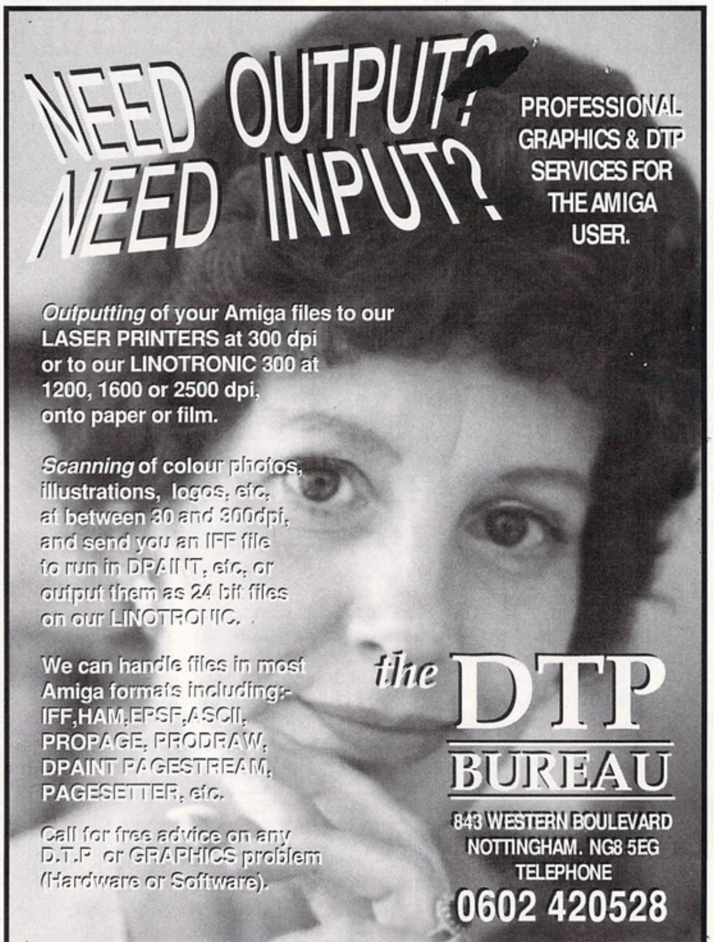
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Taking the First Steps

MARK SMIDDY removes the mystique of graphic printing, in the fifth part of this essential series for beginners.

What you might have missed in the series so far. The first four parts of this series covered the following: backing up Workbench, renaming disks, general help, getting started with printers, snapshotting and discarding, auto-starting projects, using Info, tools and projects, and more about Preferences.

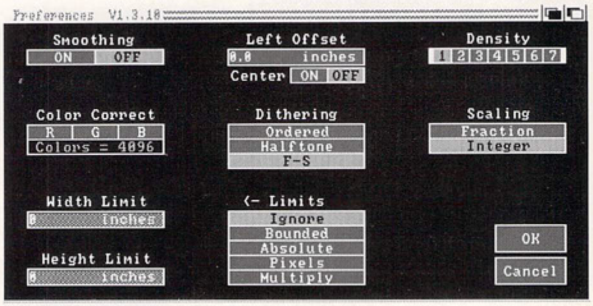
Printers are still causing some grief, so for those of you having difficulty knowing which driver to use the table below should make interesting reading. It lists all the popular printers (and some odd ones) known to work with the Amiga and the appropriate driver to use.

Not all the drivers are complete emulations though. For instance, the MPS-1000 driver can be used with the incredibly cute Canon BJ-10e, but it cannot facilitate the 360 x 360 DPI graphics mode. This is because although the Canon emulates IBM graphics, it has extensions which the IBM driver does not know about. Don't worry if you are unsure what that means – all will be revealed in good time.

LESSON 17 SETTING PRINTER GRAPHICS

1: Boot your Workbench disk.
2: Open the Preferences drawer.
3: Double-click on the Printer icon.
4: Click on the Graphic 2 box – this should bring up a display like the one in Figure One (at right).

Continued overleaf ▸



WHICH DRIVER FOR WHICH PRINTER?

Driver	Density	Compatibility/notes
Alphacom_Alphapro_101	-	With IBM Interface
Brother_HR-15XL	-	Text only
CalComp_ColorMaster	1s	ColorMaster, Colorview 5912
CalComp_ColorMaster2	1s	As above, but the faster driver requires up to 3Mb of RAM!
Canon_PJ1080A	1s	Integrex 132/ColorJet?
CBM_MPS1000	1s	Canon BJ-130/10e/300/330, IBM 5152
	2 & 5d	Most IBM compatibles
	3 & 6t	
Diablo_630	-	Diablo 630
Diablo_Advantage_D25	-	Diablo Advantage D25
Diablo_C-150	1s	Diablo C-150
EpsonQ	1-3s	Epson LQ1500/2500
	4 Mono	Star 24-10/200
		Most 24-pin Epson compats.
EpsonX[CBM_MPS-1250]	1s	Epson EX/FX/JX/LX/MX/RX
	2 & 5d	CBM MPS-1230/50/70/1550
	3 & 6t	Citizen 120D/Swift 9; Juki 5510/20;
		Pansonic KXP-1081, Star LC-10/10C/200 etc.
EpsonXOld	1-4,7 EP	
	5,6 SM	8 or 9 pin driver for use with old Epson and Star printers
		(Gemini 10-X for instance)
Generic	-	Simple text printers only
Howtek Pixelmaster	1-4s	Howtek Pixelmaster
HP_DeskJet	1-4s	DeskJet and DeskJet Plus
HP_LaserJet	1-4s	LaserJet, LaserJet Plus/II
		DeskJet 500
HP_PaintJet	1s	HP PaintJet
HP_ThinkJet	1s	HP ThinkJet
ImagewriterII	1-4s	Apple ImageWriter
	5-7d	
Apple ImageWriterII		
Nec_Pinwriter	1-3,6s	Nec P5/6/7/9/2200
	4,5 & 7d	
Okidata_92	1s	Okidata 92
Okidata_293i	1 & 2s	Okidata 292/293/393
	3 & 4d	Using IBM interface adaptor
Okimate_20	1s	Okimate 20
Quadram_Quadjet	-	Text only
Qume_Letterpro_20	1s	Qume LetterPro 20
Toshiba_P351C	1-2s	All Toshiba 351-C compatibles
Toshiba_P351SX	1-2s	Toshiba 351SX, 321SL
	3-4d	321SLC, 341SLC
Xerox_4020	1-2	Xerox 4020

Table notes:
Densitys apply to graphics only.
s = Single pass printing (suitable for colour) d = Dual pass printing (mono dumps only) t = Three pass printing (mono dumps only) EP = Epson mode SM = Star mode

The screen is split into several sections but many of these affect each other – this can be a source of confusion. Note: these options only affect graphics – but many DTP packages and Word Publishers – *NotePad, Kind Words, Page Setter* – can produce text using graphic dumps; so you should know how to operate them. All the buttons work in the same way as those you have already met in Preferences. Buttons are active when highlighted in orange (given the default palette). Some buttons – like RGB – toggle, others – like density – act like radio buttons. That is, one must be selected all the time.

Density: Of the options on Graphic 2, this is the most important for most applications. It determines speed, darkness and resolution of the printing in dots-per-inch (DPI). Generally the larger the number the darker and slower the printing. However, only a few printers (or their drivers) support more than one or two densities.

This option carries a warning with it – although the manual is not clear – do not select multi-pass printing if you are using a colour ribbon. This is because colour ribbons come with the primary colours – red, blue, yellow; plus black. Now imagine you are printing some medium green. First, the printer deposits a row of yellow dots, then a row of blue ones which mix to give a shade of green. The light colours are always printed first to avoid contamination.

On the second pass, the printer runs the yellow ribbon back over the existing green ink, and the yellow ribbon becomes covered in fresh green ink. Because printer ribbons are only a few metres long (some are shorter) just a couple of dumps could ruin a new – and expensive – colour ribbon.

Multi-pass printing is employed by the Epson FX (9-pin) series driver for densities greater than one. So if you have, for example, a Star LC-200C do not select a higher value unless you are only doing monochrome printing.

Just to confuse matters, the density switch is tied to the single sheet/Fanfold option on the Graphic 1 options screen. This only applies to 24-pin printers using the EpsonQ driver. When single sheet mode is selected, only 16 of the 24 pins are used. This option is provided for printers with weak power supplies – characterised by fading horizontal stripes on dumps.

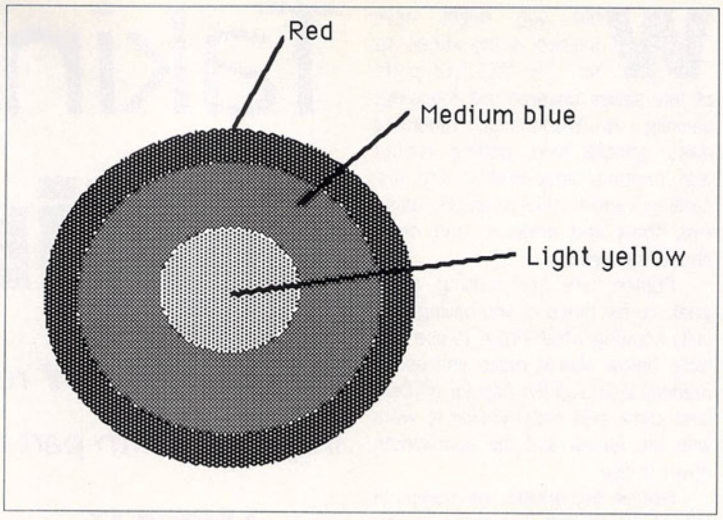


Figure Five: Dithering produces an even spread of dots to represent each shade. Darker shades use more dots and vice versa.

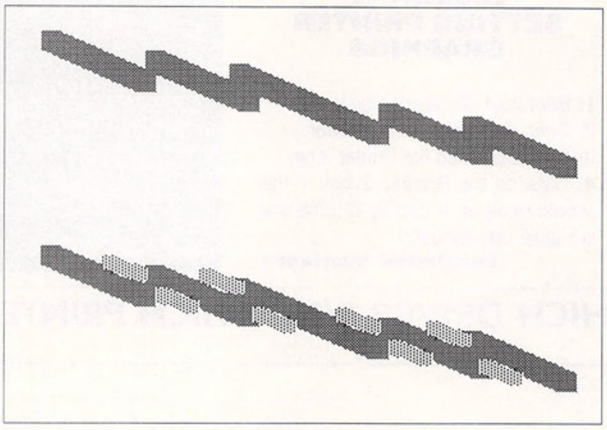


Figure Six: Smoothing adds dithering to the sharp transformations on diagonal lines – the Jaggies. This drawing is greatly exaggerated.

Dithering: Used in newspapers to reproduce pictures from 1000s of dots – the greater the concentration of dots, the darker the image. The application is similar but the dither is produced mathematically and on the Amiga. It comes in three flavours; ordered, half-tone or Floyd-Steinberg.

- Ordered dithering, the default method, is simple but not effective and is best used on low-resolution printouts when the other methods are less effective. Just because you have a high-resolution printer does not mean it will produce a high-resolution dump. For instance the 9-pin Star LC-10 has a varying resolution from 60 to 240 DPI but to achieve the high resolution print, it has to perform multiple passes. Put another way, if printing in colour on these machines you must use ordered dither.
- Half-tone dithering is more like the one used by newspapers but requires a higher resolution printout to get the

Continued overleaf ▸

DAISY, DAISY, HOW DOES YOUR PRINTER WORK?

The simplest most common printers in use today are the 9-pin impact dot-matrix (IDM) variety. Although there has been an upsurge of ink jet and even laser printers (advances in print engine technology have seen to that) impact machines refuse to go away.

The mechanics of printing – even on a fairly simple level – are a marvel of modern technology, so this discussion will be simplified. As the name implies, dot-matrix printers draw characters from an array of dots – see Figure Two. The number of dots in the matrix determines the quality of the final output; ergo, the more pins you have, the better the quality of print.

Take a typical 9-pin print head. Inside nine tiny, electrically operated – pins – are arranged vertically from top to bottom. Characters are printed by firing the pins as the head moves over the paper. As this happens, the pins hit the ribbon and punch it against the paper – depositing a small amount of ink on it. This all goes on at a mind-numbing speed and results in a screeching clatter as the pins fire 100s of times per second.

Near Letter Quality (NLQ) is achieved in much the same way, but each character has two matrixes – one slightly offset from the other. Rows of characters are usually printed in two passes and only half of the matrix is printed each time. The print head moves slower so each dot can be printed twice.

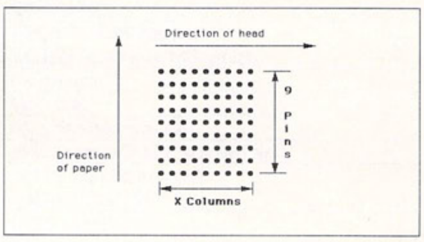


Figure Two: This is how a print head creates a dot matrix..

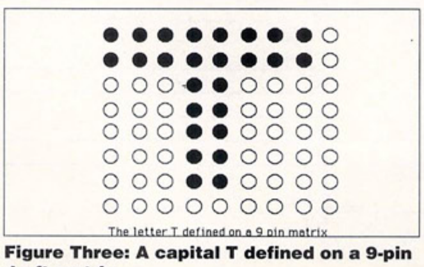


Figure Three: A capital T defined on a 9-pin draft matrix.

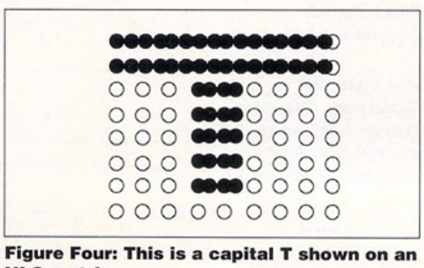


Figure Four: This is a capital T shown on an NLQ matrix

best effect. Select a density over three for 9-pin machines and greater than one for 24-pins.

- F-S or Floyd-Steinberg is the most effective dither – but incurs approximately a 50 per cent reduction in speed over the other methods. Like half-tone dithering, the Floyd-Steinberg method works best with high-resolution dumps; see half-tone above. Smoothing (see below) is not available with this technique – since it is inherent anyway. This form of dither is the most attractive to the eye and is usually characterised by the diagonal ripples or rivers which tend to appear in the printout.

Smoothing: This setting can be used to help even out the 'jaggies' on diagonal lines and around circles. It does this by dithering around sharp edges – see Figure Six. By nature of the technique, smoothing incurs approximately a 2:1 speed penalty and can only be used with ordered or half-tone dither. Smoothing works best on high-resolution printers but gives noticeable improvement to dumps produced at greater than 150 DPI. For 9-pin Epson machines set a density of four or five; for 24-pin models use a density of two, three or four.

Color Correct: Only applies to colour printing so if you have a monochrome-only machine you can skip this bit. This option is a bit of a hoax if you happen to be working on a clapped out old colour telly because it attempts to match the colours on the printer more closely to those on the screen. The three buttons are individually selectable – each affecting shades of Red (R) Green (G) and Blue (B). There is a slight penalty in using these in that there is a reduction of 308 available (printed) shades for each correction highlighted.

The best way to see this option in action is to try it. Using an art package, draw three rectangles; one each of red, green and blue. Now print it, set the colour on for all three guns and print the picture again. Compare the two dumps to see the difference.

Centre: When this option is selected the image will be printed horizontally centred on the page. This will only work if you have set the correct tractor width on the main printer preferences screen. Selecting this button overrides the Left Offset value.

Left Offset: The distance from the left of the page where the printing will start. Measured in inches and tenths. This option defaults to 0.0" and is overridden by the centring switch. This is a string gadget, so click once inside it – then enter the new value.

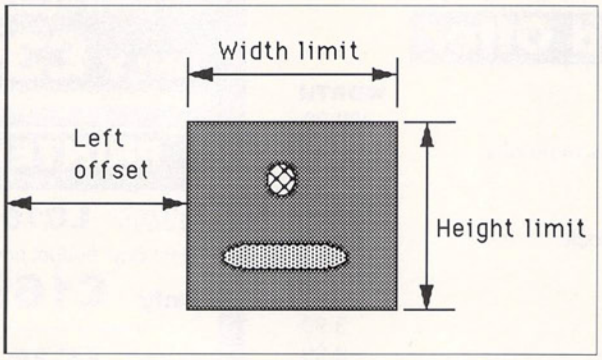
Scaling: Determines how the dump will be scaled to fit the page. The default is fractional which is suitable for normal artwork. When integer scaling is in effect, each dot on the picture will be represented as an exact number of dots on the page. This has curious effects because it overrides the aspect ration correction. It should be used when printing bit-image fonts such as those in *NotePad* and *Pagesetter* to prevent them from becoming garbled by fractional scaling.

IF YOU GET STUCK

Readers experiencing problems with any part of of this series should write to:

Mark Smiddy
C/O Bruce Smith Books, PO Box 382
St. Albans, Hertfordshire, AL2 3DZ.

What does it cost? Nothing – except a self-addressed envelope. Please keep your questions as brief as possible and don't forget to mention what your system consists of! Your feedback is important because it will mould future installments of the series.



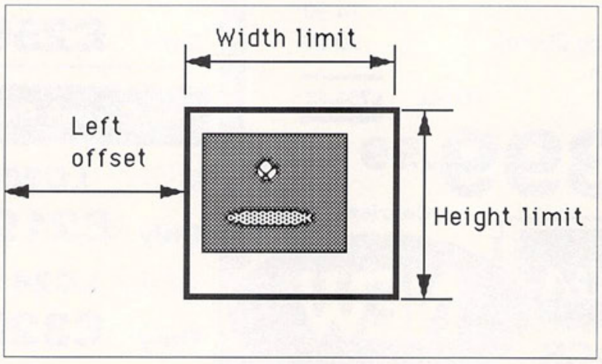


Figure Seven: How the limits affect a picture

Figure Eight: This picture is enclosed within a bounding box set by the limits.

Height and Width limits: Determine the width and height of a printed picture in tenths of inches; pixels or a multiplication factor. When one of these is set to zero, the correct value will be calculated for you. In this way you can set the width of your picture and force the driver to maintain its correct height, and therefore, aspect ratio. Note: this is only accurate when fractional scaling is in effect.

Limits: These switches determine how the width and height limits affect a picture.

- Absolute: The picture's width and height is determined in inches by the limit settings (Figure Seven). So to get a picture four-inches wide, set a width of 40 and select absolute. If you leave the height set at zero the aspect ratio will be corrected automatically. This works in reverse too, but remember the paper for a narrow tractor printer is only eight inches.

- Bounded: The image will be placed inside a bounding box of the width and height determined by the setting in the limits box. This differs from the absolute limits because the picture will be fitted inside the bounding box – not scaled to fit it (Figure Eight). The size of the box is fixed in tenths of inches, so to get a bounding box three inches wide by two inches high, set width to 30 and height to 20.

- Pixels: exactly the same as the absolute option – but the width and height values are read as pixels.

- Multiply: when this option is used, values in the width and height boxes are used to multiply the number of pixels in the picture. So if the picture is 320 X 256 and you enter two in the width box, the printed version would be 640 pixels wide – with the vertical aspect corrected accordingly.

Thus endeth the fifth lesson.

NEXT MONTH... The Shell!

The A-Z of Computer Terms

Builds up in monthly parts to a complete glossary. Part Four:T-V.

Task: A low-level program controlled by EXEC. Tasks are in fact the backbone of the Amiga controlling everything from the keyboard right through to the disk drives. Tasks can do almost anything – but they are not allowed to open the DOS.library. There is no limit to the number of tasks running under EXEC apart from the amount of memory and speed restrictions. See also: Process

Thru Port: Socket at the rear of external disk drives (for instance) which allows the addition of more drives in a chain. Note the standard Amiga A500 can only support one external drive unless you invest in a much more powerful power supply.

Trashcan: Special area of a Workbench disk where icons can be moved temporarily. These icons and their associated tools can be deleted by activating "Empty Trash" from the Workbench. Any icons will remain in the trashcan until you either remove them or empty the can.

UNIX: Alternative, multi-user operating system from AT & T. Very fast, very powerful and industry standard.

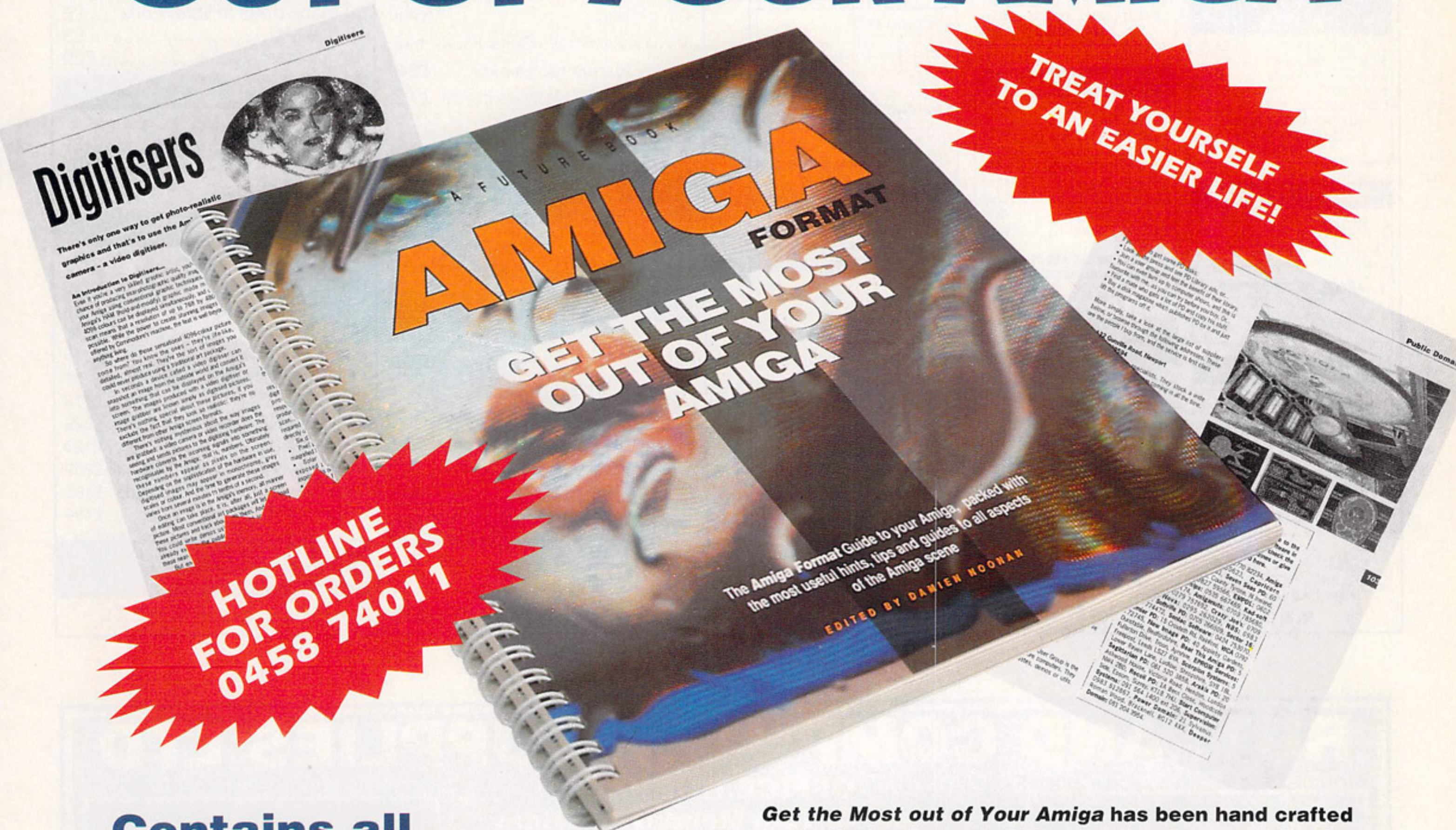
Vanilla: This is sometimes used to refer to an unexpanded machine – as it is supplied by Commodore. A vanilla A500 for instance, has 512K of RAM and a single disk drive.

VDU: Visual Display Unit.

Virus: Rouge program introduced into the system by person or persons unknown. The best way to catch one is use pirated software or PD from a dubious source.

Vulcan nerve death grip: Act of pressing CTRL Left-Amiga Right-Amiga at the same time.

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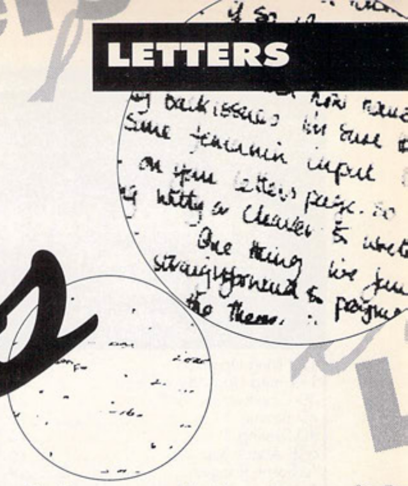
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Letters



Keep your letters brief if possible, entertaining, original and don't write on vegetables. Send to **Letters, Amiga Format, 30 Monmouth Street, Bath, BA1 2BW**. The best win a limited edition AF T-shirt and a binder.

You want?

Next issue will bring a good look at the results of the questionnaire from Issue 19 that so many of you kindly filled in and sent back to us. Naturally this is of vast importance to us, because it tells us what you want from the magazine and gives us an idea of how to give you it.

We'll be able to find out the simple, factual things, like how many of you have an expanded 1 Megabyte of memory. This kind of information is very useful not only to ourselves, but also to software houses, who can then plan their new productions accordingly, but also to Commodore themselves. It's likely to affect decisions like the recent 1 Megabyte *Screen Gems Pack* offer and may possibly influence the future of the Amiga as a whole.

But more interesting still, to me at least, are those little blank spaces at the end of the forms into which you have inserted your own personal comments. Rest assured we'll be sampling a good few of those, whether they are praiseworthy or critical. But of interest right now is one particular comment that a good many of you made, which I couldn't help but notice when I flicked through the questionnaires as they arrived in their droves every morning.

Perhaps we really should have asked you all what you thought of the idea of an extra Coverdisk on every issue. We didn't. But nonetheless, a huge number of you spontaneously expressed an overwhelming approval of the idea. And we listened.

It's not, currently at least, economically or logistically possible to put two disks on every single issue: and giving a complete full-price game away will soon be impossible because the games software houses have decreed that it is not A Good Thing. All the same, so many of you liked the idea that we are taking the chance – and it really is a last chance – to give you a couple of more-or-less free games. As you may have read on Page 10, for the next two issues you will be able to get a complete full-price game for only an extra £1. And we reckon it's a bargain. We hope you agree.

Of course, the disks you get with a magazine aren't the main thing. We're trying the whole time to improve the magazine itself, so even after the questionnaires, keep your comments coming in. And we'll try to keep *Amiga Format* exactly the way it is: Britain's most successful and most exciting computer magazine.

Damien

Read PC?

The *Read Atari* program on Coverdisk 20 is very useful. Did you know it also reads MS-DOS disks? This means that people like me, having only a television display for the Amiga, can write files on a PC and finish them off on the Amiga. this saves no end of eye-strain. I don't suppose there will be a similar utility for writing onto PC/Atari disks with your magazine in the future?

P R Fox
Sleaford, Lincolnshire

Hmm, it would be nice, wouldn't it? Of course, the real limitation on what we can and can't put on the Coverdisk is you, the reader. If people aren't sendindg the stuff in, we've got no chance of using it. Where are you, all you creative programmer types? Send your stuff in and earn some money.

Spectrum Fan

In the March issue of *AF* you asked if people really wanted a Spectrum emulator. I can reply with an emphatic "yes". I own an A500 and I am quite happy with it, but the Amiga lacks many classics which are only available on 8-bit machines: for instance, the famous Rebelstar Raiders games. It is also worth noting that conversions like *Laser Squad* are inferior on the Amiga, despite looking more pretty.

It is a fact of life that games on the Spectrum cannot hide behind neat graphics and stereo sound and must have better gameplay to be good, like *Robocop.* The Spectrum also has a simplicity about its operation compared to the anti-userness of the Amiga.

Colin M Young
Kirkintilloch, Glasgow

I have to admit that you're quite right. It's always been a bit too easy on the Amiga to hide shoddy gameplay behind good graphics. On the other hand, I don't really think it's very complex on an Amiga to shove a game disk in the drive and switch on. And I don't think you'd find many people queueing up to buy their Speccies back. But if you do hanker for the old days…

Speccy Offer

There does exist a Spectrum emulator and it can be found on a magazine disk available from Seventeen Bit Software PD. The disk is entitled *Update 16.* The program will run Speccy BASIC and will, via a sampler, load Speccy programs from tape which can also be saved to Amiga disk. I hope this is of some help, but I don't know why anybody, used to the qualities of the Amiga, would want to emulate a Speccy.

N A Chapman
Walthamstow, London

There you go, Spec-chums! How spooky, eh? Now you can run Advanced Lawnmower Simulator… *(That's enough* Your Sinclair *talk—Ed).*

PRIZE Letter

Mail Moral

About two months ago, I ordered the *Light Force* compilation from the cheapest mail-order company I could find. I waited, nothing happened. My mother's cheque was cashed, so she phoned up, querying this… *(Quick fast forward through letter – Ed.)* …We are still awaiting this software and if it doesn't come, heads will roll at the courts.

PS They don't advertise in your magazine, which is great. The moral: mail order may be cheaper, but it's more risky.

Edward Marriott
Shrewsbury

I've printed this letter for two good reasons. One: we do not take advertisements from firms we have found to be unreliable. Two: if you do have a problem, our advertising salespeople, Jennie, Duncan and Jackie, have close working relationships with all our advertisers and will endeavour to help sort out any problems you may have with them. Of course sometimes there's nothing we can do, as in the case of companies who cease trading like Nova PD and SoftSellers of late, but even then we can always help with advice about what action you should take next. Finally remember that we're all human and sometimes things really do get lost in the post or the computer system, so do try to be patient if you believe a company is doing its best to help.

What Next?

When I first started reading *Amiga Format* I was pleased to see there was a page telling you what was coming up next month – and next month, to my astonishment, the page had gone. I wondered whether perhaps aliens had come down to earth and ripped out the page. Then the next month it wasn't there again… By now it would not have taken superior

intelligence *(that's us! – Ed)* to have realised this is a complaint and not a compliment.

Andrew Neill
Portadown, Co Armagh

Errm... sorry, Andrew! To be honest, there's no real excuse for this. I don't even know why we haven't had one in. How useful do other readers find it? I've always thought it was potentially unrelaible, because sometimes you see magazines promising things and they just don't arrive. What do you think?

Wot? No Amiga?

Just a quick note to remind you that not all your readers own Amigas. I have been reading *Amiga Format* for six months and all the compos have been aimed at Amiga owners, with all prizes being expansions, monitors etc. How about a compo for the beast itself, so those of us who can only read about the A500 can start to use it?

Paul Tomlinson
Dunstable

Honesty time again. We've had it suggested to us before by people who were putting up the prizes for our competitions that we should give away an Amiga itself, but we've always said no. Obviously we have to cater for the majority of readers and they are, of course, Amiga owners already. I've never had a letter before from a regular reader who does not have an Amiga. are there many more of you out there? Please do write in and let us know of your existence.

There is always the possibility, if there's enough response to warrant it, of us giving away an Amiga that would also appeal to the majority of A500 owners: an A1500, for instance. Tell us what you think.

A Game Lad

On the 11th March, at 9.45pm, I completed *Turrican 2 – The Final Flight* without the aid of any kind of cheat. Am I the first to do so? The end sequence shows a picture of a large piece of The Machine's domain sticking out of the ground and *Turrican* flying away in his jetpack.

Douglas Rickards
Lanark

Errm... well done! As far as I know you may well be the first to finish it, but I'm afraid we've got no real way of finding out, have we? Anyone else want to boast about their magnificent gaming achievements?

Modesty

Just thought I would write and let you know that I am a new user of the Amiga and I would like to say what a good magazine this is. When I got the Amiga I was given your book *Get the Most out of your Amiga.* This I found to be highly informative and superior to the manuals that come with the computer. I also sent for the tutorial video by Penny Lane, which was also an excellent product. I would recommend any beginners to start with these two products: they won't go far wrong.

P Henchy,
Milton Keynes

On behalf of myself and the magazine... aw, shucks! It's very nice of you to say so. We do try very hard, really we do. The guys at Penny Lane can get swollen-headed all for themselves.

Critique

I hunted high and low for the March issue of *Amiga Format* in my local newsagent's and I eventually found it next to the *Beano* in the comic section. I can well understand the confusion when I took a closer look at the front cover. To say it looks like *Comic Cuts* or some other penny-dreadful is an understatement. You seem to have an identity crisis to say the least. Either you are a serious Amiga magazine or a comic for those whose use of the Amiga goes no further than playing games. So let's have the serious bits illustrated in a more serious manner.

Owen M Kemp
Norwich

Actually, the cover and all the other pages of the lead feature were illustrated in a style based on the work of Roy Lichtenstein, one of the leading artists of the 20th Century. Whether his particular style has any artistic merit is, of course, a matter for individual taste, but personally I like it. I also think it's a good idea to brighten up the more serious pages of the magazine to attract the more light-hearted reader towards them. Just because a piece is 'serious', it doesn't have to be dull – and to encourage an

atmosphere in which the technical side of the Amiga is seen as dull does not, to my mind, seem healthy at all.

Career Opportunities

My thanks to whoever made the difference to Issue 20. I've been buying the magazine on and off since Issue One and have seen every issue produced up until now, but the last issue seems to be much better than ever before. *(Thanks – Ed)*. Keep up the good work! *(We'll try – Ed)*.

Moving on to John Webb's enquiry about careers in computing, I feel that your advice is now somewhat dated. Many more employers are now asking for computer qualifications before even accepting interviews from candidates. Although A Levels can be a pain for computing subjects, the training given by such courses can often give you an advantage when starting at university or polytechnic.

Many employers now prefer to take on graduates from HND courses for programming as they tend to be more 'task-oriented', ie they generally become productive more quickly than degree graduates. Mixing another subject, for instance Business Studies, with pure computer studies is also a good idea, because it makes life easier in the real world, therefore making yourself more marketable to an employer.

Iain Frankish
Bedford

Thanks for the advice, Iain. When I answered John's question originally I think I mentioned that I wasn't really too qualified to speak and that we would appreciate any information from people who know what they're talking about, and that still stands. My experience is of game programmers and computer journalists, all of whom tend to get where they are today through enthusiasm and talent rather than qualifications. There is, however, an increasingly professional attitude in more corporate areas of programming: the thing to decide first, I think, is where you think you want to work.

Cross?

As a very recent Amiga user, I've found *AF* a great help in finding my way around, and I'm now an avid and regular reader. Reading Letters in Issue 20 I couldn't understand the relevance of your heading 'Jesus, Saves' above the letters on *Interphase*. I understand the 'save' bit, but why degrade a great magazine and an interesting subject by use of words which offend those of your readers who regard Jesus as somebody very special?

Trevor McAvoy,
Lower Broadheath, Worcester

Thanks for the letter, Trevor.

PRIZE Letter

What About Us?

Much to the dismay of myself and a lot of other Amiga-ers in the North East, the main Commodore show and other such shows are held only in the south of England. An excellent idea in my books would be to have a "Commodore Roadshow", rather like a certain well-known national radio station, travelling the length and breadth of the country showing us less fortunate people a deeper insight into software and hardware.

Another idea would be to have the main static Commodore Show at different venues around the country, rather than just in the south of England.

Tony Pattinson
Co Durham

I'd been thinking for a while that a good many people around the country must find it tricky getting to these shows in London: in fact, it occurs to me every time we mention another one in the News Pages just how unfair it all is. It's a pain in the bum for us to get up to London for these things.

In actual fact, Atari did a touring show last year, which was an exhibition based on a train that stopped at a number of major stations for a day each, so it's not a brand-new idea. The main problem with a touring show is that shows are good for buying things, and to carry heaps of goods around the country would be a big effort for the exhibitors. Still, I like the idea of a big show that changes its venues to allow us all a look.

AMIGA, ATARI & PC SOFTWARE

The Tipster

This **HORSE RACING** software was used to select the 100/1 NORTONS COIN outsider in last years GOLD CUP. Data for this program requires the **RACING POST.** An **INTERNATIONAL** version is available for **AMIGA & ATARI** computers using the **DAILY MIRROR** for data on UK races.

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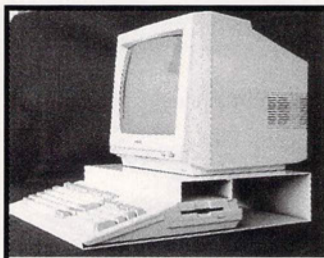
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Pleased

When I found your Getting Started feature in the February Issue I was very pleased. After I bought March – Part Three – I felt I must find out what I had missed out on in Part One, so I sent off for *AF* 18 from the back-issue service.

I am really writing to say how very impressed I was at the response. I actually received your marvellous mag in less than one week. posted on Monday – received on Saturday! Well done!

Malcolm Lemmon
Sutton-in-Ashfield

I'm very pleased to hear it. Our subscriptions people in the small village of Somerton in Somerset do all that kind of stuff, and though they work very hard indeed they seldom get a mention, so a big pat on the back for the chaps down there.

More Opportunities

I am 20 years old and I am a computer operator. I started really by chance, being in the right place at the right time. I left school at 16 with O Levels in Maths and Physics and basically lazed about for the summer until I heard about a job at a chemical company. Only at the interview did I found out that it was a YTS. AAARRGH!

I went through with it anyway as I thought it would be really good experience and included in the contract was a part-time course at the local further-education college doing a BTEC in Business Studies.

I was stationed in one department for nine months, after which I moved around, eventually coming to the computer department. I picked things up very quickly there because I enjoyed it. I was eventually offered a trainee position there for two years, during which time I learnt a great deal. There were experts there that I could pick the brains of and they were happy to teach me.

I am now a senior computer operator (with a different firm) earning a very good wage for someone my age. The duties are more varied and there is always someone to help with programming of my own.

My advice would be to write off to local firms and see what sort of jobs they could offer you with training, or ask what qualifications they require and try to attain them. It is always best to continue your education as far as you can, as you may regret not doing so later on in life.

Hope this helps.

Steve Lester
Cambridge

Thanks very much indeed, Steve. It's always useful to hear other people's experience, particularly when it bears out the basics that we're always being told. You've done well by getting into the right place (the 'foot in the door' approach) and being willing to learn in the job as well as through training. Anyone else want to tell us their life stories for the edification of others?

PD Burn?

My local computer shop sells PD for £2.30 per disk: they do the copying there and then and there is no postage needed. Are they ripping people off?

Roy Westwood,
Accrington, Lancashire

Well, it depends on your point of view. What the shop is really selling you is a copying service: if it's convenient is it not worth it?

ADVERTISER'S INDEX

Death of the Guru!

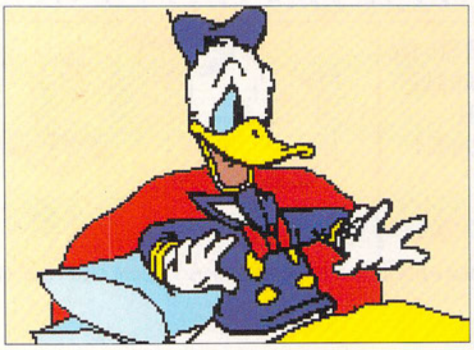
"And now, the end is near, it's time to take that final curtain..." Yes, in the immortal words of Sid Vicious *(Surely it was Frank Sinatra? – Ed)* we have to announce the last, departing performance of the Guru's Meditations page. End of an era? No... more like a compulsory redundancy, I reckon.

The Guru page has never quite managed to live up to its expectations and the Guru himself, never mind dear old Captain Whinge (do you remember him?) has long since disappeared. Even the Amiga will no longer remember the Guru message when the new Workbench 2 arrives: a boring 'system error' instead. Ah, well.

Way back in Issue 12 – crumbs, that's nearly a year ago! – we asked if anyone had any better ideas for this page. Among the ideas we received were BASIC program listings, a page for AMOS users, leaving it blank (!), a round-up of forthcoming events, crosswords, a cartoon strip, and finally a page where the best reader's essay on a given subject gets an airing. Is that as good as you could do?

Well, just wait for next month to find out what happens. The usual mish-mash of competiton winners and little puzzle competitions will be there, but in a whole new exciting page. Worth waiting for? Sure it will be!

Did you win a trip to Disney World?



Back in the dim and distant past of Issue 20, Amiga Format and Entertainment International promised to whisk two people off on the holiday of a lifetime to Disney World in Florida. Who will the lucky winner be?

Well, now the excitement is mounting here at the office as we dip into the huge pile of entries to pull out a winner. And the winnner is... (Roll of drums, atmospheric spotlight in darkened room)... in reverse order... namsoB leinaD!!! Yes, that's Daniel Bosman of Maidstone in Kent! Congratulations Daniel, and you'll be hearing from Entertainment International very soon about booking a date for your holiday, so make sure you buy some trendy beach shorts!

Spot the Shot



In the trade, a picture of a computer display is called a screenshot. Yer modern digital technology allows us to mess around with these piccies greatly. Each month we will feature a small portion of a screen from a famous game: all you have to do is tell us what the game is and we'll put you in a draw to win a special prize. Write to Spot the Shot, Amiga Format, at our Bath address, before April 10th.

Who Said That?

Care to win a special prize? Each month you will find, on the bottom left corner of our Contents page near the blurb about who did what, an obscure quotation. Each month the most accurate (or the most imaginative and amusing!) description of who said that and where will win a nice little something (hopefully a limited edition Amiga Format T shirt, but we haven't had any printed yet). Write to Who Said That?, Amiga Format, at our Bath address, before May 10th.

Next month: find out who said "When I hear the word 'culture', I reach for my gun".

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To the newsagent: Amiga Format is published by Future Publishing and is available from your local wholesaler. send back all your Future shop save coupons for entry in a free prize draw to Kate Hodges at Future Publishing, 30 Monmouth Street, BATH BA1 2BW.

Are you getting Amiga Format?

We get an awful lot of calls from people who can't get hold of *Amiga Format* even a day or two after it comes out, and there's a darned good reason: it sells out! If you want to make sure of a copy every month, then follow this simple guide.

- Always ask. Your newsagent might have some in.
- Try a larger newsagent, such as Menzies or Smiths. Again, ask just in case.
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